

# An Affordable Housing Pattern Book for Durham, North Carolina

Master's Project by

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## **Abstract**

This master's project provides the background research for an affordable housing architectural pattern book for Durham, North Carolina. An introduction describes the current housing situation in Durham and why an affordable housing pattern book will improve the quality of the built environment. Chapter 1 is a literature review that describes how the best pattern books have played a role in creating beautiful, valuable built environments in the United States. Before the widespread availability of pattern books, most buildings were constructed by people with little or no architectural knowledge. They constructed dwellings using the tools at hand and rudimentary skills. Pattern books brought architectural design within reach of middle-class Americans, allowing them to build high-quality houses modeled on prevailing architectural trends. The rise of pattern books roughly coincided with the Industrial Revolution. Technological innovations such as balloon-frame construction and mass-produced items like the wire nail made buildings cheaper and stronger. The rising wealth of the middle class enabled growing numbers of Americans to afford their own house. Large numbers of pattern book houses were built in the century they were most popular, roughly 1830-1930.

The analysis of pattern book literature is followed in Chapter 2 by case studies of several recent pattern books that have been influential in shaping the built environment. These case studies describe the characteristics that the best new pattern books share. The results from publication of two pattern books are also included.

Chapter 3 is a history of Durham that focuses on how the city's creation, industrial growth, and postwar decline shaped the built environment. Founded in 1850 as a railroad stop, Durham quickly became a thriving industrial city because of the popularity of its brightleaf tobacco. The town grew exponentially between 1870 and 1900, and its prosperity continued until the end of World War II. Durham's decline occurred because of the population's shift from the city to the suburbs, a lack of investment in the businesses in the city, and a number of urban renewal projects that destroyed many of the historic buildings in the core. In the past few years, however, a resurgence of investment downtown and the rehabilitation of several aging

neighborhoods near the core have encouraged hope that Durham will soon be a thriving city again.

Chapter 4 defines the scope of the pattern book and the purpose it will serve for Durham's residents. It details the four architectural housing styles that are most prevalent in Durham's historic neighborhoods: vernacular mill houses, Victorians, Colonial Revivals, and Arts and Crafts. Each section gives a brief history of the origin of the style, examples of neighborhoods in Durham with houses built in that style, and photographs highlighting some of the most common details.

The paper concludes with some recommendations for Durham. The city should examine the successes and setbacks other municipalities have had with their own pattern books. Durham should strive to imitate the success that those places have had. The city currently has a number of strong, stable historic neighborhoods as well as opportunities for more growth and stability in other neighborhoods. Creating a pattern book of Durham's houses can help revitalize the city and preserve the heritage of those historic communities.

## **Introduction**

Durham, North Carolina, is a city that is making a concerted effort to increase the amount of affordable housing available to its residents and help its low-income them rise out of poverty. The city works with the non-profit organizations Self-Help and Habitat for Humanity to provide new affordable housing. TROSA is renovating a number of older houses in the core. The Hope VI project in the East End is revitalizing that area of town with new low-income and market-rate housing. However, much of the affordable housing currently being constructed lacks the style or detailing that decorate so many of the older homes in Durham. Non-profits understandably want to build as many houses as possible, and to do so they often build houses as inexpensively as possible. One result of this cost-cutting is that affordable housing is often less attractive than the other houses near it because it is so plain and unadorned. When an affordable house is obviously affordable and looks out of place, it is harder for it to look and feel like a part of the neighborhood.

This master's project was undertaken because of the need for better affordable housing in Durham. Much of that housing is being put into existing neighborhoods, many of which are historic. When new housing that is of a markedly different style is added to an existing neighborhood, it lessens the attractiveness of the street and sometimes the neighborhood. By recognizing and respecting the housing styles most prevalent in Durham, developers and homebuilders can incorporate similar details into new housing. The effect will be a neighborhood that is enhanced by the addition of new housing into vacant lots and retains its attractiveness and style. The homeowner can feel proud of having a house that is seamlessly integrated into a neighborhood. Also, the resale value of the house is more likely to increase at a rate similar to its neighbors because it is more attractive than the housing currently being built.

The city has recognized the importance of improving the appearance of its affordable housing, and it calls for the creation of an affordable housing pattern book in its comprehensive plan. This master's project provides the background information on the importance that pattern books have played in the built environment in the United States. It describes several recent pattern books that have been written for municipalities and

details the results that the books have had on new construction. It examines how the history of Durham influenced the built environment in the town and the efforts that have been made to preserve that architecture in recent years. It identifies the four most prevalent architectural styles in Durham and depicts them in photographs from a number of neighborhoods. Finally, it offers some recommendations for Durham as it works to complete the pattern book.

## **Chapter 1**

### **A Review of the Literature: The History of Pattern Books**

#### **An Introduction on the Use of Pattern Books**

This review of the literature has been arranged chronologically because major historical events and architectural innovations have directly affected the style and content of pattern books. A brief overview of the historical architectural books used by gentlemen in the colonial era illustrates the architectural sources available as well as who had access to them. After the American Revolution, the desire for a new, distinctive architecture led to the adoption of Greek-inspired Classical architecture as the national style. It also led to the creation of a number of builders' guides for craftsmen that explained how to build it.

In the first half of the nineteenth century, as building techniques modernized and materials became cheaper, "idea books" targeted at potential homeowners in the growing middle class became popular. After the Civil War, the vast expansion of railroads coupled with the proliferation of manufacturing plants during the Industrial Revolution led to an unprecedented boom in construction. In addition to traditional pattern books, catalogs rose in popularity, designed to sell manufactured goods of every variety for a house, from doors and windows to mantelpieces and trim for outdoor porches. At the turn of the twentieth century, the sale and scale of manufactured goods expanded so that entire houses could be purchased from a catalog and every piece shipped by railroad to a homeowner's plot of land.

This boom in construction ended abruptly with the onset of the Great Depression, and after World War II, housing was in demand at such a vast scale that large-scale developers became the primary target audience of a dwindling number of pattern books. They were revived in the 1970s and have been slowly gaining in popularity since then.

## **The Influence of Ancient Texts on American Colonial Buildings**

Modern architecture has as its cornerstone the *Ten Books on Architecture*, a set of volumes written by Vitruvius, a Roman who wrote the only treatise on classical architecture which exists today. His comprehensive views about building towns, which directly influenced the basic framework for many cities, is still studied by contemporary architects and designers. Vitruvius's work was rediscovered in the Renaissance, and one of the most influential architects of that period, Leon Battista Alberti, drew heavily on Vitruvius's books for his own work, *On the Art of Building in Ten Books* (Gindroz 2004, Reiff 2000).

He was followed in the sixteenth century by Andrea Palladio, whose *Four Books on Architecture* may be the most influential work on architecture ever published. Palladio's format combines descriptions of architectural detail with building designs, a style that has been used by pattern book creators ever since. His first volume lists the materials and techniques that should be used for construction and defines the five different types of Classical column. The next two volumes are a portfolio of his work, and they serve to show the reader how the instructions in the first volume will look when they are executed. The fourth book shows historic precedents. His drawings are both specific and general: they are accessible to the general public as well as detailed enough to be used by an architect to construct a building (see Figure 1 and Figure 2) (Gindroz 2004, Reiff 2000).

Most of the wealthy gentlemen in the American colonies received a classical education, which included the study of architecture. They would have been familiar with the works of Vitruvius, Palladio, and other architects. Living in newly settled areas without any professional architects, they themselves usually designed and oversaw the construction of their houses, using the Classical and Renaissance-era books as guides (McAlester & McAlester 2005).



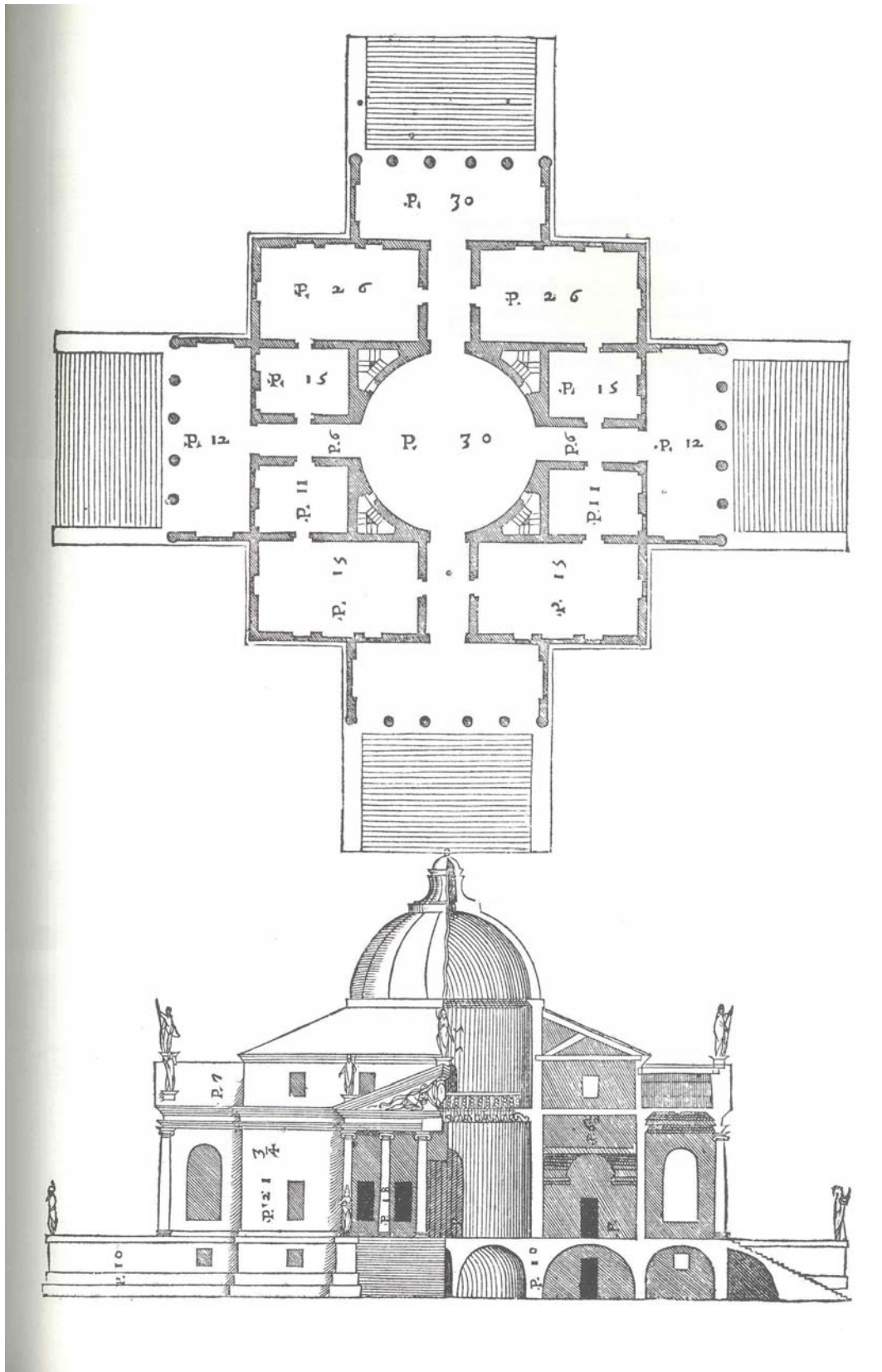


Figure 1: A drawing from Palladio's Four Books of Architecture (1997).

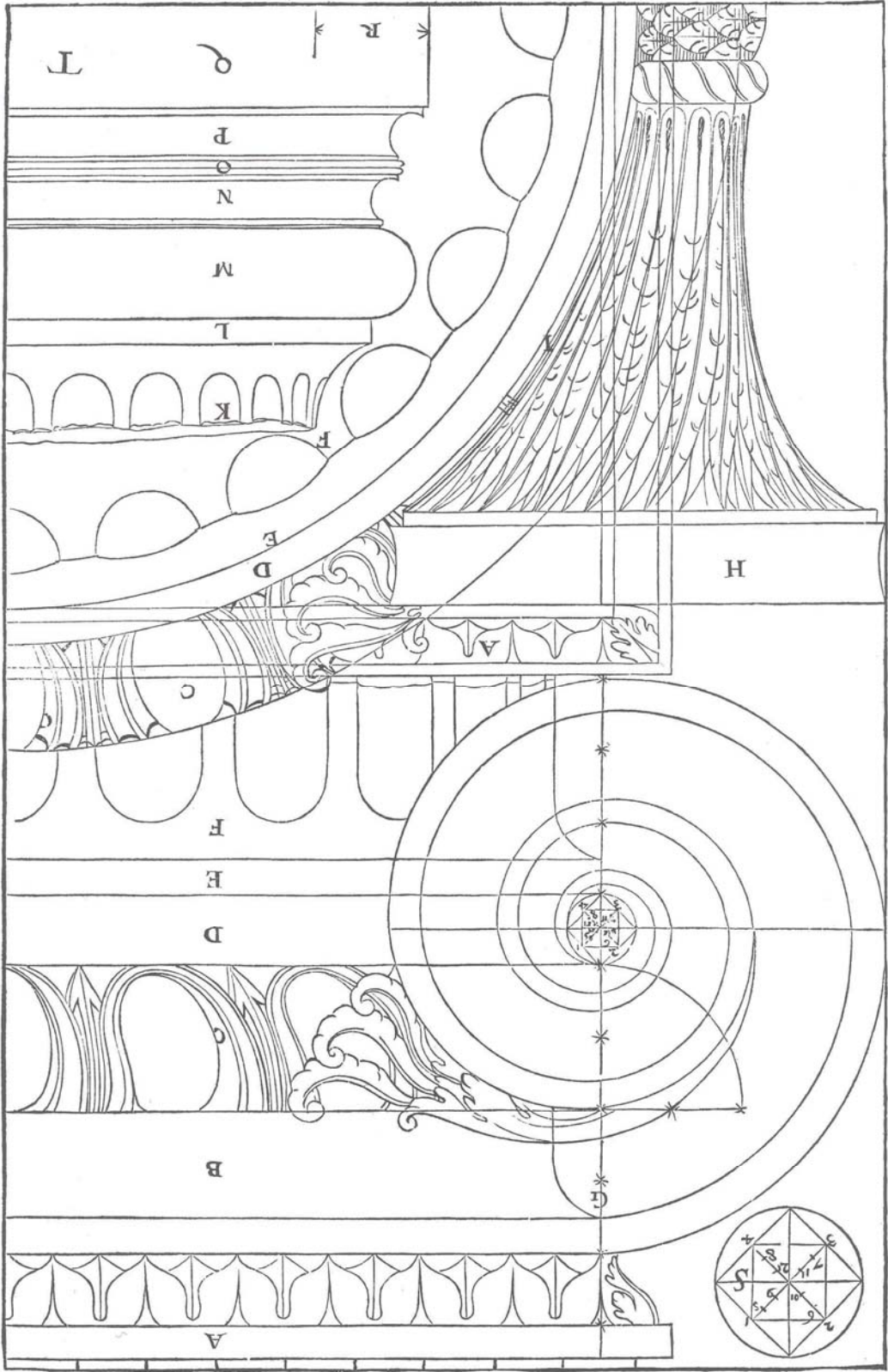


Figure 2: A drawing from Palladio's *Four Books of Architecture* (1997).

## **Builders' Guides Educate Tradesmen**

Although the ruling class had the knowledge and ability to construct good-quality housing, that housing was a luxury available only to a small fraction of settlers. Most of the buildings constructed by settlers in the colonies were crude and designed purely for utility. As more British, Dutch, and German immigrants arrived, this building tradition remained. The colonies attracted immigrants who were usually farmers, rarely stone masons, craftsmen, or builders. Therefore, most buildings were constructed by people with little or no construction training.

Gradually over the course of the eighteenth century, an increase in domestic building activity in England created a demand for more practical architectural books. Along with the historical architectural treatises, which remained the primary source for gentlemen architects in England and the U.S., a new style emerged in England that was aimed at members of the building trade and explained measurements, geometry, and building techniques. This style was published in an inexpensive form that these workmen could afford (Reiff 2000). These builder's guides would remain a primary source of architectural information in England and the U.S. well into the nineteenth century. These books were the first wide dissemination of architectural knowledge accessible to the public.

Builder's guides typically contained many illustrations. Authors intended for their designs to be copied by their readers. They were influential in the American colonies as well, although to a more limited extent (Reiff 2000). Because there were no publishing houses in the colonies until the eve of the American Revolution, books had to be imported and were very limited in supply. The first builder's guide printed in the U.S., Asher Benjamin's *The Country Builder's Assistant*, was not published until 1797. It was followed by other influential books, such as Minard Lafever's *Modern Builder's Guide* (Guter & Foster 1992, McAlester & McAlester 2005, Reiff 2000). Benjamin was one of the most influential architects of the early nineteenth century. He wrote seven books over 46 years which were released in over forty editions and often revised heavily (see Figure 3).

His preface to the fourth edition of *Practice of Architecture* describes the information a craftsman would find. It also explains the goal he and other authors of

builder's guides had: to educate men who had no opportunity to attend school to learn their craft. These men were often living in isolated villages far from any other practitioner. Builder's guides were often the only resource available. Benjamin writes,

Those Carpenters in country villages who aspire to eminence in their business, having no Architect to consult, are under the necessity of studying the science thoroughly and without a master. To them, therefore, is this book peculiarly adapted; for it contains the principles of many expensive folios, condensed into a narrow space and applied to modern practice....The principles and practice of the science are developed, in the following pages, in a detailed and systematic manner. The text is taken from the Grecian system, which is now universally adopted by the first professors of the art, both in Europe and America; and whose economical plan, and plain massive features, are peculiarly adapted to the republican habits of this country. I have given examples of each of the five orders of Architecture; first in the usual way, then repeating their details upon a large scale....I have also given six examples of Frontispieces and Porticoes, with their details drawn on a large scale. To those are subjoined explanations and practical observations on their proportions and adaptations to the buildings in which they are to be used: also, a variety of examples of Cornices, for both external and internal finishings, and of Architraves and Base Mouldings, accurately drawn one half of the full size for practice, and accompanied with practical observations on their size and fitness; examples of Doors, Windows, and their decorations; Ornamental Mouldings, Stairs, and Carpentry; together with all the elements of Architecture which are necessary to supply the wants of the practical builder. To these are added a complete drawing of a church, with all its details laid down in imitation of working drawings, with suitable explanations (Benjamin 1994).

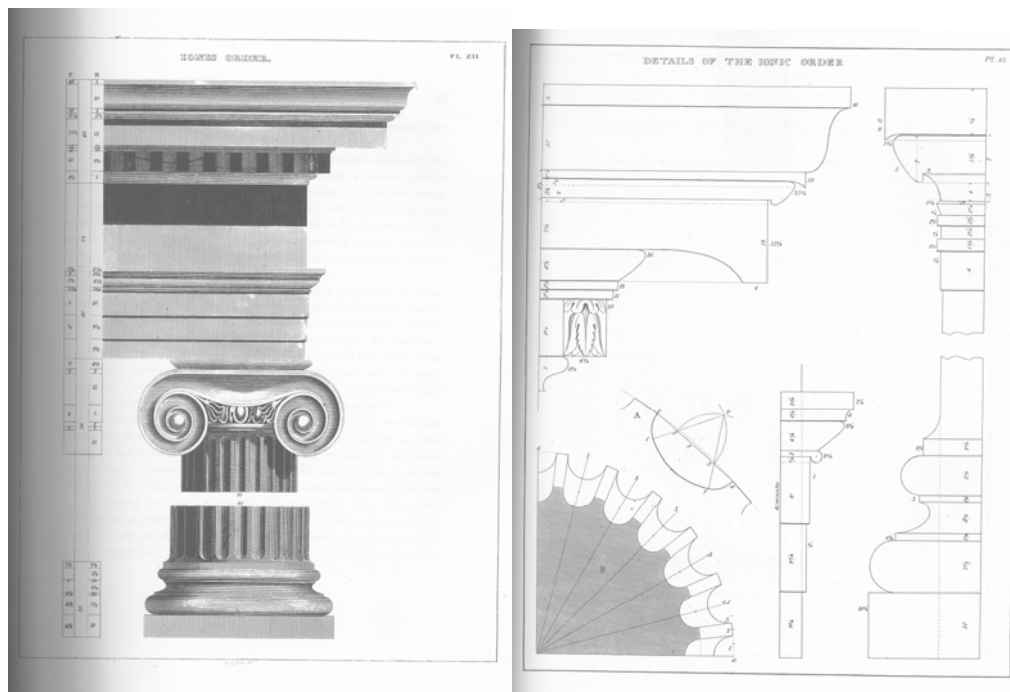


Figure 3: Illustrations from Practice of architecture: and, the builder's guide: two pattern books of American classical architecture (Benjamin 1994).

## Pattern Books Bring Good Design to the Middle Class

After their introduction at the turn of the century, builders' guides continued to grow in popularity, especially when Greek Revival buildings became popular in the 1820s. The new nation felt it deserved superior architecture, and Greece, the birthplace of democracy, was the ideal model for it (McAlester & McAlester 2005). This new style of architecture was described in builder's guides; the popularity of one fueled the other. These books were in demand primarily by craftsmen, though a few prospective homeowners read them as well. In his comprehensive treatment of pattern book architecture, *Houses from Books: Treatises, Pattern Books, and Catalogs in American Architecture*, Daniel Reiff examines in detail the influential authors whose builders' guides most affected the built environment. He lists hundreds of examples of houses built from various house plans found in such books. In this period the influence of a book far exceeded the person who bought it: books were often loaned because of their cost. It was also common for a builder to copy an existing structure for a client without a plan (Reiff 2000).

The first modern pattern book was published in 1837. It was introduced when the U.S. was still a primarily agrarian country. Most builders had to rely on the natural resources at hand rather than machine-made materials. For instance, nails were hand-fashioned from iron, a scarce resource. They were so valuable that some homeowners would remove the nails from their houses if they moved. Few factories existed in the early nineteenth century, and most consumer goods had to be imported. After an embargo on imported goods in 1807, however, the United States began manufacturing more goods out of necessity.

By the 1830s, "machine-made nails, standardization of building materials, and developments in lighter framing techniques had transformed American building" (Smeins 1999 p. 74). Because houses could be built less expensively, owning a house became a goal that was within reach of more Americans, thus increasing the demand for housing. At the same time, however, the transportation system did not yet stretch across much of the United States. While a couple of cities such as Chicago or New York had ready access to raw materials, manufactured goods, and skilled labor, few towns and villages did.

It was into this environment that Alexander Jackson Davis published *Rural Residences, Etc. Consisting of Designs, Original and Selected, for Cottages, Farm-Houses, Villas, and Village Churches: with Brief Explanations, Estimates, and a Specification of Materials, Construction, Etc.* (McAlester & McAlester 2005, Reiff 2000). Davis was the only major pattern book author in this period who was trained as an artist and draftsman rather than a craftsman (Reiff 2000). He built some of the most influential architecture in the mid-nineteenth century, including the New York Stock Exchange. His book provides eight different examples of architectural styles, and it includes only simple plans and elevations rather than the more technical drawings common in builders' guides (Guter & Foster 1992, Reiff 2000). Many subsequent pattern books included in-depth drawings of architectural details, another of his ideas.

*Rural Residences* represents a clear change in focus from the builder's guides. Davis was writing to a different audience: prospective homeowners. He includes no mathematical formulas or sketches diagramming Classical columns. Instead, he has chapters that describe fundamental architectural principles. He gives examples of appropriate materials for the interior and exterior of the house. He explains how to choose a good site for the house. He lists the best plants to use in landscaping one's yard (Downing 1967, Downing 1969). Previous books had illustrated portions of houses and embellishments for them, but Davis's book of house plan styles was the first one to include three-dimensional views and floor plans (McAlester & McAlester 2005). He is clearly writing to an audience that has little knowledge of architectural principles, one that is interested in finding one good house to build and inhabit.

Although Davis's work was not widely published, it directly influenced Andrew Jackson Downing, a more renowned public figure, who would use Davis's format and ideas to reach a much broader audience (McAlester & McAlester 2005). Davis's writing and influence on Downing are evident in Downing's own pattern books. He published *Cottage Residences; or, A Series of Designs for Rural Cottages and Cottage Villas, and Their Gardens and Grounds* in 1842 (see Figure 4). Downing became the most popular and influential author of the mid-nineteenth century. This horticulturalist and landscape designer had already published books with some reference to architecture, but *Cottage*



## DESIGN I.

*A Suburban Cottage for a small Family.*

WE have supposed this cottage to be situated in the suburbs of a town or village, and, for the sake of illustrating the treatment of a small portion of ground, we shall also imagine it to be placed on a lot of ground 75 feet front by 150 deep, which, at the time of commencing the building, has upon it no trees or improvements of any description.

By referring to the plan of the first floor of this cottage, Fig. 4, the reader will perceive on the left of the hall, the parlor, or living-room, 16 feet by 21 feet, having in communication with it, a pantry and a closet for books—each 4 feet by 8 feet. On the opposite side of the hall are, the kitchen, 14 feet by 16, and a bedroom 12 feet by 16 feet.

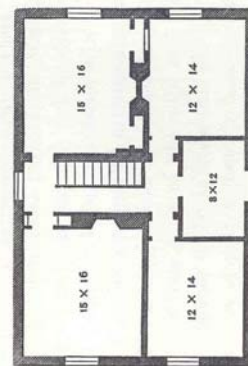


FIG. 4.

In the plan of the chamber floor, Fig. 5, there are four bedrooms of good size, and one of small dimensions. Sufficient cellar room will be obtained under the living-room, closets,

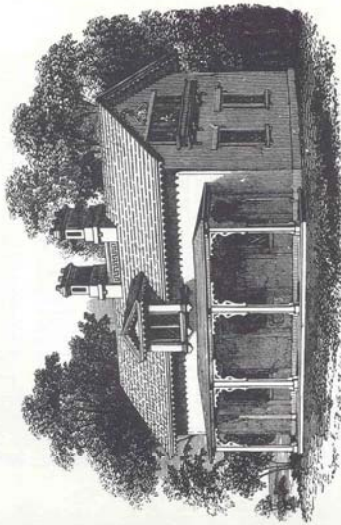
DESIGN I.  
A SUBURBAN COTTAGE.

Fig. 3.

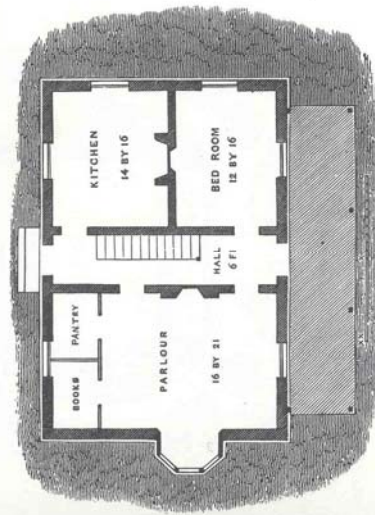


Fig. 5.

Figure 4: A page from *Cottage Residences* (Downing 1967).

*Residences* was the first to treat it exclusively (Reiff 2000). As Davis did in his books, Downing opens with a chapter introducing the reader to basic architectural principles. In addition to his house plans, he informs the reader about how to choose building materials; gives instructions on how to build; and advises the reader how to landscape the surrounding yard (Downing 1967).

*Cottage Residences* and Downing's other books had an enormous influence on American architecture. Reiff documents numerous examples of houses based on his designs that still exist across much of the U.S. (2000). Downing's books were often the first literary introduction to architecture that many Americans had. Their incomes were growing and many of them were able to purchase homes for the first time. Because of Downing's influence, they then had access to high-quality design for their houses.

In his introduction to Downing's last book, *The Architecture of Country Houses*, J. Stewart Johnson notes, "Downing's importance is not so much as that of an innovator as of a popularizer" of the work of his friend Davis and other influential architects (1969 p. vii). Unlike most pattern book authors, Downing often gave credit to the architects who designed patterns he copied (Reiff 2000). However, even as he published other authors' patterns, he was attempting to discover or create a proper architectural style for American houses (Downing 1969). By this point in time the U.S. had enough skilled craftsmen to adapt his plans well. Downing knew this, and it is one reason why there are so few technical drawings in his book. In fact, many of the houses built using these simple illustrations are as well-built as those constructed by professional architects (Reiff 2000).

One theme of Downing's work that would become increasingly important was presenting the home as a symbol of American values and lifestyle. Soon other pattern book authors began using the idea of homeownership as a symbol for moral values and as a way to further advertise the desirability of the books they wanted to sell. This idea occurred more openly at the end of the century with the rise of nationalism. Downing extols the virtues of homeownership in the Preface to *The Architecture of Country Houses*:



There are three excellent reasons why my countrymen should have good houses.

The first is, because a good house (and by this I mean a fitting, tasteful, and significant dwelling) is a powerful means of civilization....The second reason is, because the *individual home* has a great social value for a people....It is the solitude and freedom of the family home in the country which constantly preserves the purity of the nation, and invigorates the intellectual powers....The third reason is, because there is a moral influence in a country home—when, among an educated, truthful, and refined people, it is an echo of their character—which is more powerful than any mere oral teachings of virtue and morality (Downing 1969 p. xix-xx).

Like Davis and Downing, other pattern book authors began writing to an audience of potential homeowners rather than builders. Rather than including the technical details common in earlier books such as Benjamin's *The Practical Builder's Guide* or Lafever's *Modern Builder's Guide*, authors published "idea books" that introduced readers to new and varied architectural styles (Guter & Foster 1992, Reiff 2000). Much of the content of the books was educational: trained architects were scarce, their services expensive. Thus, these pattern books were often the primary source of architectural information that was available to the general public. As building practices and styles grew more diverse, pattern books only became more popular (Smeins 1999).

Although pattern books were eclipsing builders' guides in influence, some authors did combine both approaches as a way to appeal to a broader audience. One such example is Oliver P. Smith's *The Domestic Architect: Comprising a Series of Original Designs for Rural and Ornamental Cottages*, published in 1854. He included plates of classical orders, geometrical problems, and drawings of architectural details that would be useful for a carpenter. He also included house designs using Downing's method of presentation, which appealed to homeowners. This dual approach was also used by Samuel Sloan, who published *The Model Architect* in two volumes in 1852 and 1853 (see Figure 5). His ambitious aim was to produce a book that would

contain a series of original designs, adapted to every grade of living, from the humblest cottage to the noblest mansion, all accurately delineated to a scale, so that every one might examine for himself the judge of their practicality. [The author] also deemed it requisite that these designs should be complete, comprising both elevations and plans, together with all such details as are usually made out in the form of working drawings, so that the builder might have all parts, both ornamental and constructive, immediately before his eye. In connexion with these, there should be such specifications and bills of quantities as are usually prepared by an architect, and in addition, articles on the various parts of the building that should furnish valuable information to the experienced man and to the learner (Reiff 2000 p. 72).

This comprehensive approach to writing a pattern book, providing all information to both potential homeowners and their builders, would be expanded as the range of services offered by pattern book authors increased after the Civil War.

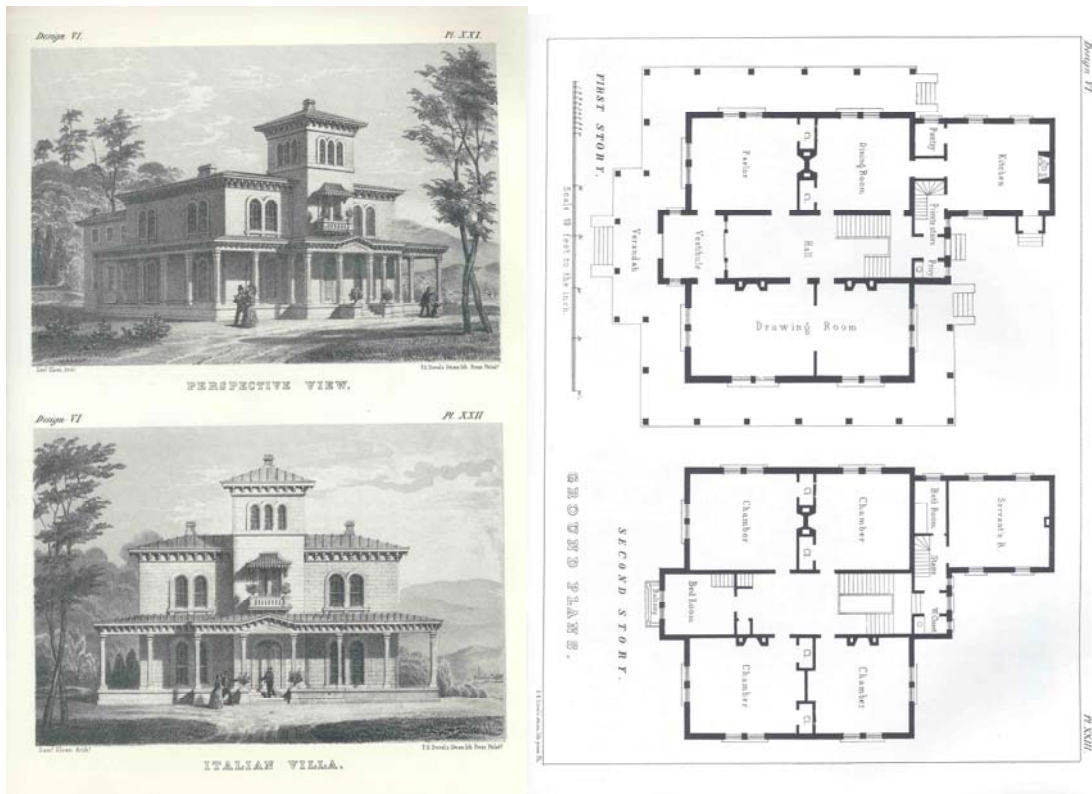


Figure 5: Illustrations from The Model Architect (Sloan 1980).

## **The Industrial Revolution and Capitalism Commercialize Pattern**

### **Books**

In the last decades of the nineteenth century, rapid development of the railroad system and population growth fueled an enormous construction boom. It was not uncommon for a new town to double or triple in size in just a few years. The manufacturing that had begun to a limited extent in the earlier part of the century was greatly increased during the Industrial Revolution, which began in the 1870s (Smeins 1999). The Industrial Revolution also enabled men who had been born with nothing to amass huge amounts of wealth, offering an example to other Americans of the reward for hard work, at least in a few cases. The rise of capitalism in the U.S. and England began to influence the business practices of many Americans.

The ability to manufacture wire nails was an integral component to the boom in construction. The balloon-frame method of creating a house, which used wire nails, was first used in Chicago in the 1830s, and it quickly spread throughout the Midwest. Balloon-frame construction is a much more efficient use of wood than earlier methods; it is usually also cheaper (McAlester & McAlester 2005, Reiff 2000). More pieces of thinner, smaller wood are used rather than the large trunks and beams common in vernacular frontier houses, where skilled labor was scarce and wood plentiful. As the population grew, the supply of skilled labor grew as well, and these craftsmen were able to produce balloon-frame houses more efficiently and quickly than the vernacular style (McAlester & McAlester 2005).

The rapid development of the railroad system was what made this method of building available across the country (McAlester & McAlester 2005, Reiff 2000, Smeins 1999). The first railroad track was laid in the 1830s, but it was not until after the Civil War that railroads supplanted the canal system as the primary form of transportation. Manufacturing could occur at a much greater rate if the market were the entire country rather than the limited geographic area that could be supplied through the canal system. Thus, the railroad system was inextricably linked to the rise of the Industrial Revolution and the availability of factory-made goods such as the 2x4 planks used in balloon-frame houses. Prefabricated houses, called “knockdown houses,” were first conceived during the California Gold Rush in 1849-50 and shipped coast to coast. However, the practice of

selling an entire home through a mail-order catalog would not become common for another 50 years. As factories proliferated during the Industrial Revolution in the second half of the nineteenth century, items such as doors, windows, moldings, and balustrades became widely available and much cheaper than they had been (Reiff 2000).

The increasing efficiency of house building meant that new “streetcar suburbs” could spring up quickly around cities. Prior to the creation of suburbs, all housing was in the urban core. The poorest residents lived in substandard, crowded tenements near the factories they worked in, many of which polluted the air with dirt, soot, and noise. People who could afford to leave the city were drawn to these new suburbs outside the industrial center, commuting to work in horse cars in the 1860s, cable cars in the 1880s, and electric street cars and trolleys by the turn of the century (Guter & Foster 1992, Smeins 1999). Suburbs were advertised as a place to escape the dirt and unsanitary conditions in the city, and a house in the suburbs became a dream for Americans of all economic classes—a dream that was encouraged and reinforced by pattern book authors and advertisers (Smeins 1999).

In her book *Building an American Identity: Pattern Book Homes and Communities, 1870-1900*, Linda E. Smeins provides a historical overview and a close examination of the cultural and social forces that were involved in the pattern books during the Industrial Revolution. Pattern book authors used the idea of nationalism to persuade readers that homeownership was an important symbol of an American identity and a necessary part of becoming American. Smeins argues that pattern books mimic the prevailing beliefs of the time period they appeared in as a way to increase sales. The growth of pattern books in the post-Civil War era was fueled first by demand for new housing. This was partly because the population was increasing, but perhaps more importantly,

owning a home on a small plot of land is imbedded in national history as a mark of distinction when comparisons are made between the United States and other countries....The individual home for a nuclear family was established firmly as a national attribute in the late nineteenth century. As millions of immigrants entered the United States, with many of them crowding in city tenements, buying a home became more than a personal act. Individually owned, detached homes—in contrast with multiple housing collectively—were a sign of being American (1999 p. 26).

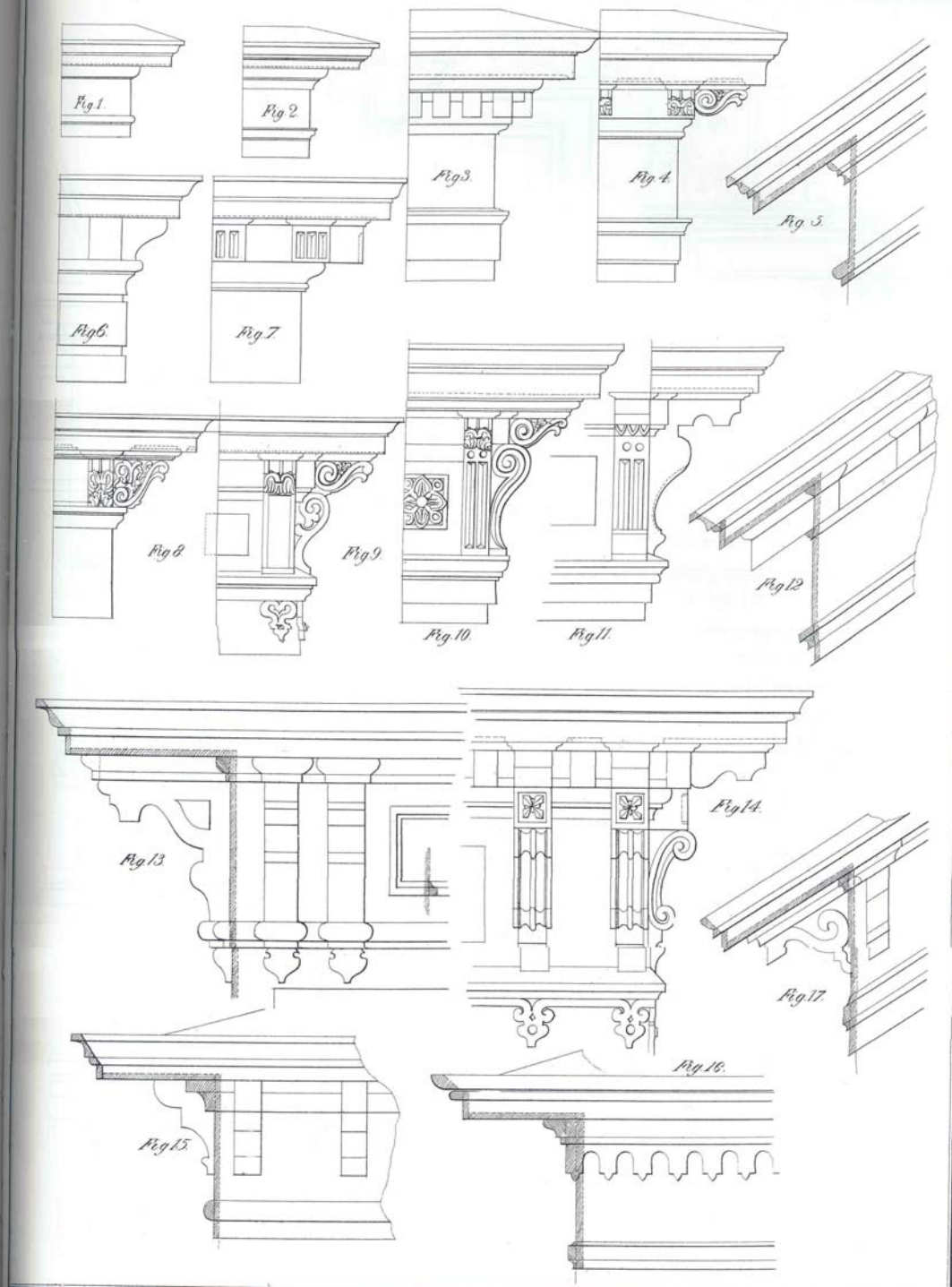
Another sign of being American, at least in the late nineteenth century, was the desire to work hard and make money. Pattern book authors in this period adopted the

capitalist business practices that had become common, competing with each other to offer more and better services along with an increasing variety of products. Rather than offering only architectural plans, they began selling “specifications, loans, consulting services, even building materials” (Smeins 1999 p. 97). They also supported and used the technological advances that made new homes cheaper and better than old ones.

One innovation that becomes increasingly popular in the nineteenth century is the mail-order house plan. The first of these was sold by Cleaveland and Backus Brothers in their book *Village and Farm Cottages* in 1856. Readers were invited to purchase detailed plans of the houses illustrated in the book for \$3-5 each, about one-tenth the price of an individualized house plan. The authors outlined the benefits of buying their house plans: cost savings, efficiency, and accuracy. This idea of a mail-order plan became widespread in the 1870s (Reiff 2000).

The idea books were complemented by design books for craftsmen. There was still a great demand for architectural design books for craftsmen, and the small sketches of house plans given in idea books were not sufficient for a builder to copy. Therefore, books for craftsmen continued to be popular and to include the same technical details and drawings that the builder’s guides had had.

Another innovation was to create a book containing only detail work, not house plans. The first of these, *Architecture: Designs for Street Fronts, Suburban Houses, and Cottages, Including Details for both Exterior and Interior*, was published in 1868 by Marcus F. Cummings and Charles C. Miller (see Figure 6). It did not include a single house plan. The book was so popular that eight editions were published in only four years (Reiff 2000). One reason could have been that people were less mobile then: a couple might marry, move into a house, and never move again. Thus a book of details would help a homeowner improve on an existing house. Books that included both house plans and detailed architectural touches remained more common, however. Books with technical drawings remained popular because they were much easier for builders to comprehend and use in construction. *Architecture* and many of the other pattern books published in this period also advertised the architectural services of the authors and encouraged readers to purchase plans by mail (Reiff 2000).



Lith. of J. B. M. 24 Vesey St. N.Y.

Figure 6: Illustrations from Architecture (Cummings and Miller 1997).

*Palliser's Model Homes for the People*, published by George Palliser in 1876, was the first book comprised entirely of mail-order architectural plans (see Figure 7). It became one of the most widely distributed books of its time. The 46-page booklet sold for twenty-five cents and was much cheaper than most other pattern books (Palliser 1978, Reiff 2000, Smeins 1999). Palliser's book is indicative of some of the larger shifts in pattern books that occurred after the "idea books" of the 1840s. *Model Homes* is a short booklet, cheaply bound and with almost half its pages consisting of advertisements for building and building materials companies. After a brief introduction, the book contains only the house plans themselves and the advertisements. There is no discussion of architectural theories or information about site planning, building materials, or landscaping (Palliser 1978). Other sources from this period are similar. *Late Victorian Architectural Details* and E. C. Hussey's *Cottage Architecture of Victorian America* are little more than bound catalogs of items for sale (*Late Victorian Architectural Details* 1978, Hussey 1994).

Palliser begins his introduction with an explanation of the need for good architecture, a need that he has the ability to meet:

In consequence of my increasing business, supplying parties in every section of the United States with designs, plans, specifications, etc., I find it necessary to adopt a system for conducting this class of business, and which I trust will supply a want which has long been felt, especially in the country, where architects have done but little business, and the people have been obliged to plan their own houses or copy from their neighbors.

There are a great many people who think they cannot afford to pay an architect for the necessary drawings, specifications, etc., required in the construction of buildings. To these, I have to say that the amount charged by me for the same will not pay for the time people will waste trying to design and draw their own plans, while the saving in cost of construction and increased value of the building, by having a well considered design, will in a great many cases amount to twenty-five per cent., compared with the irregular, ill-designed buildings which are being erected in every city, town and country in the United States, discordant in appearance, pernicious to the eye of the cultivated, and out of all keeping and harmony with their surroundings, a great many of them being the square house, painted white, with green blinds, which would not be countenanced for a moment by any one who prides himself on his good taste (Palliser 1978 p.1).

Nearly five thousand copies of *Model Homes* were sold in two years, and they were distributed in every state and province. Palliser was the first author to profit not from the royalties on the books he sold but from the sales of plans and associated services. He enabled a prospective homeowner to communicate with a pattern book architect and buy a specialized plan for a much lower price than commissioning a traditional architect for a custom house. His company capitalized on the success of *Model*



**DESIGN NO. 2.**

House suitable for farm or country, 32x46; 1st floor, parlor, dining room, kitchen, wash room and pantry; 2d floor, 4 chambers, small store or bath room and 5 large closets; milk room in cellar; large verandas front and rear. Cost, \$2,700.

Plans and specifications, \$15.

**DESIGN NO. 3.**

Gothic house, 34x44, suitable for one or two families; 1st floor, 4 rooms; 2d floor, 4 rooms, and 2 rooms in attic, and is design No. 1 enlarged. Cost, about \$3,700.

Plans and specifications, \$20.

**DESIGN NO. 4.**

Small gothic cottage; 2 bay windows, 3 rooms on each floor and bath room; large closets; is suitable for suburban residence for any one of small means. Cost, \$2,500.

Plans and specifications, \$15.

**DESIGN NO. 5.**

Is a neat cottage erected by Hon. P. T. Barnum and D. W. Sherwood, Esq., on Cottage street, this city. Cost, \$3,200; 9 rooms; side bay window; laundry in cellar; is a good house for city or country.

Plans and specifications, \$18.

**DESIGN NO. 6.**

Gothic house erected by J. S. Griffith, Esq., Lafayette street, this city; is arranged for one or two families; having 11 rooms, bath room, closets, etc.; veranda on front and side; ornamental gables. Cost, \$4,000.

Plans and specifications, \$25.

**DESIGN NO. 7.**

Model gothic cottage, erected on Cottage street, this city, by Hon. P. T. Barnum and D. W. Sherwood, Esq., and is now owned and occupied by the builder, J. D. Brown. (See elevation and 1st floor plan cuts on page 5.) 2nd floor, 4 bed rooms and bath room; slate roof; suitable; very handsome appearance.

Lithographed set of plans,  $\frac{1}{4}$  inch scale, 50 cents.

**DESIGN NO. 8.**

Double house, 38x40; each side for two families; working men's homes; high brick basement; superstructure of wood; basement, kitchen, dining room, pantry and sink room; 1st floor, parlor, sitting room and chamber; 2nd floor, 4 rooms, pantry and sink rooms; large closets; front veranda; designed for H. G. Husted, Esq. Cost, \$3,500.

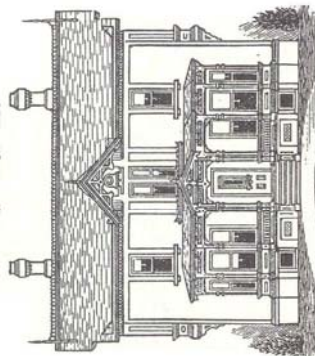
Plans and specifications, \$20.

**DESIGN NO. 9.**

House designed for W. Hurley, Esq., this city; high brick basement, containing kitchen, dining room, wash room, pantry, store cellar, closets, etc.; 1st story, parlor, sitting room, library and chamber; 2nd story, 5 chambers and bath room; large verandas front and one side; one story bay window; exterior appearance similar to Design No. 23, and is a good

house for a large family, and can be built in a substantial manner for from \$3,000 to \$3,500, according to location.

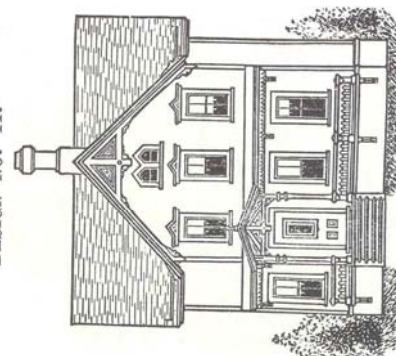
Plans and specifications, \$20.

**DESIGN NO. 10.**

FRONT ELEVATION.

Is a very handsome house as will be seen by cut, arranged for one family or can be used to equal advantage by two families; 1st floor, parlor, dining room, kitchen, pantries and closets, and 2 chambers; 2nd floor, 5 rooms, etc.; cost to erect as plans now are for 2 families, \$3,500, and for one family with improvements, \$3,000 additional.

Plans and specifications, \$20.

**DESIGN NO. 11.**

FRONT ELEVATION.

Cheap Cottage, neat and suitable for mechanic of taste; 1st floor, parlor,

Figure 7: Pages from Model Homes (Palliser 1978).



*Homes* by quickly printing more pattern books in several styles: larger, expensively bound volumes; more of the cheap booklets; a book of details. In 25 years his company published nearly that many books. One of these books, *Useful Details*, sold 50,000 copies in six years (Smeins 1999).

Another innovator in pattern books was R. W. Shoppell, who first published a catalog, *Artistic Modern Houses of Low Cost*. Shoppell capitalized on the growing popularity of subscription mail-order magazines and catalogs by transforming his book into *Shoppell's Modern Houses*, a quarterly publication that remained in print for over twenty years (Reiff 2000, Smeins 1999). Shoppell followed the example of *Godey's Lady's Book and Lady's Magazine*, which had begun publishing house designs in 1846 (Guter & Foster 1992, Reiff 2000, Smeins 1999). Shoppell emphasized the expediency of his patterns, and, like Palliser, he was transparent in explaining the process and cost of ordering a house plan. Other pattern books were indirect about advertising their services, and many did not list any prices at all. Shoppell offered no custom designs, as previous authors had. Instead, his firm would make only small changes and help a buyer draw up a contract using bids that had been submitted. In six years his firm sold 8,000 house plans. Shoppell was also the first pattern book author to finance or facilitate mortgage loans on houses (Reiff 2000, Smeins 1999).

More successful than all his predecessors was George Barber, whose *Cottage Souvenir No. 2 Containing One Hundred and Twenty Original Designs in Cottage and Detail Architecture* brought his firm orders for approximately 20,000 sets of plans between 1891 and 1908. For \$8.50 to \$45, a client would receive

a full set of working drawings, which consisted of plans for each floor and the basement, a roof plan, and elevations of all four sides; these were blueprint copies, because the blueprints were “just as good and exact reproductions of the original drawings” as cloth tracings. Detail sheets were also provided; these, however, were “drawn by hand (not printed)” and were full size, “ready to be pricked off on the material for working out.” One also received “printed blank specifications filled out as far as we can understand your requirements,” as well as “two blank contract forms and a sheet of color samples for outside painting.” Barber confidently assured the client that “everything necessary for the builder is supplied” (Reiff 2000 pp. 114-5).

By 1902, Barber had expanded his business to sell the building material needed for his house plans, foreshadowing the growth of catalog “houses for sale” that would become so popular a few years later (Reiff 2000).

## Catalogs Offering Houses for Sale Overshadow Pattern Books

By the turn of the century, a growing number of factors led to a boom in new construction of housing. More and more suburbs were built in every town with electric streetcars, enabling workers to live farther from their employment but still enjoy a short commute. The residents of a single tenement building in the city would fill six or eight detached single-family homes in a new suburb, using a much greater quantity of building materials in addition to more land. The Industrial Revolution in the nineteenth century contributed to a higher standard of living for Americans, many of whom could afford to own a home for the first time in their lives (Reiff 2000). The boom did not slow down until the Great Depression in the 1930s, when numerous lumberyards, contractors, and the building department of Sears, Roebuck went out of business. Although the U.S. government tried to spur housing growth and employment with the Federal Housing Administration, which offered long-term, low-interest loans, widespread growth did not occur again until after World War II (Guter & Foster 1992).

Instead of pattern books, catalogs offering house patterns and eventually entire houses for sale became the dominant source for new house plans. Like pattern books, these catalogs by Aladdin; Sears, Roebuck; and smaller competitors provided information about construction techniques and interior decorating tips along with their plans and styles. They continued the trend of offering a wide array of services to the customer. Both catalogs selling entire houses and pattern books showing house plans were highly popular with consumers. House plans still sold well because they could be adapted more easily and more extensively than prefabricated houses. Numerous new companies sprang up, all with glossy catalogs, to sell an increasingly wider variety of homes in all sizes and architectural styles (Reiff 2000). The two most successful companies, Aladdin and Sears, Roebuck, did well in part because they allowed their customers to make some alterations at no extra cost: for instance, a house that came with siding could be furnished with shingles instead (Guter & Foster 1992).

Gustav Stickley, one of the most influential designers in this period, became a prominent housing designer because of the Arts and Crafts styles he published in his magazine, *The Craftsman*. Originally well-known for his Mission style furniture, his magazine covered reformist ideas in a variety of subjects. It was his housing designs that

would become his most well-known creation. He published a full-length book, *Craftsman Homes*, in 1908. His style was a rejection of the ornate, stylized house popular in the nineteenth century, and it was copied by many other designers in this period. Like the 1840s “idea books,” *Craftsman Homes* is filled with both house plans and discussions on the philosophy behind his house styles, information on the foundation a house would require, how to landscape a yard, and where the house would be most appropriate. As he writes in his introduction,

These designs serve to show the development of the Craftsman idea of home building, decoration and furnishing, and to make plain the fundamental principles which underlie the planning of every Craftsman house. These principles are simplicity, durability, fitness for the life that is to be lived in the house and harmony with its natural surroundings. Given these things, the beauty and comfort of the home environment develops as naturally as a flowering plant from the root” (Stickley 1979 p. 9).

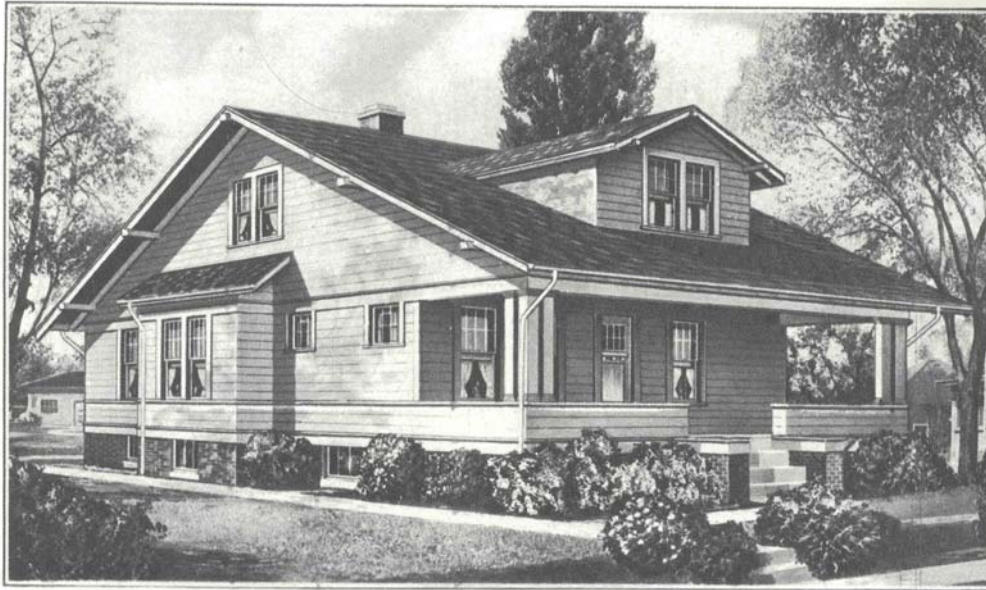
As the public’s passion for house catalogs continued, the catalogs themselves grew larger and larger, culminating with the encyclopedic *Home Builders Catalog*. Compiled by the Home Builders Catalog Company of Chicago and New York, it included in its 1927 edition

a fully indexed section on building materials and products (33-525) representing 404 manufacturers or firms—a useful way of uniformly presenting such advertisements. Next came the section “Small Home Architecture” (582-632) explaining architectural styles, the importance of plans and specifications, the need for high-quality materials, the nature of mortgages, how to select the home site, the methods of economizing when building, samples of old house remodeling, as well as illustrated discussions on interior decoration. The final portion of the huge catalog consisted of 604 house plans (including 12 summer cottages and 20 duplex dwellings) of frame, brick, or stucco construction and designs for 57 garages (Reiff 2000 p. 227).

The *Home Builders Catalog* was intended to advertise both building products and its plan service, and, like many earlier pattern books, its target audience included both prospective homeowners and potential builders (Reiff 2000).

Like its competitors, Sears, Roebuck had a nearly exhaustive list of services for its customers. The company included in its catalog, in addition to blueprints and materials, an itemized bill of materials, a form for the contractor, a construction contract, and a “Special ‘How to Build’ book” for the homeowner who would build the house himself. Sears sometimes financed the homes directly, too, offering to lend 75% of the total cost at 6% for a five to 15 year term (Reiff 2000); eventually it offered some mortgages for 100% loans (*Sears* 1991). One hundred thousand Sears homes were built

## FIVE OR EIGHT ROOMS AND BATH



**THE SHERIDAN** is a popular type of bungalow, planned to give the utmost livable space for its size, 28 by 38 feet. The upkeep cost is very small. All the materials are high grade. Porch extends across the entire front of the bungalow and is 26 feet wide by 8 feet deep. It may be screened or glazed and used as a most desirable room.

### FIRST FLOOR

**The Living Room.** A view of the living room suggests a comfortable home. Plenty of space permits placing of piano, furniture and pictures. Size, 15 feet 2 inches wide by 12 feet 2 inches deep. Room is well lighted and cross ventilated by the double front window and the two casement windows at the side.

**The Dining Room.** Living and dining rooms were planned and may be used as one room or as separate rooms, being connected by a cased opening. Dining room is well lighted by double window and thorough ventilation is assured. There is ample space to seat and serve the family; also space for a buffet.

**Honor Bilt**  
*The Sheridan*  
No. P3224 "Already Cut" and Fitted  
\$2,245<sup>00</sup>

**The Kitchen.** The kitchen is entered from dining room by a swinging door. Sink is immediately inside the door, with space for range alongside. Table space is arranged under double window. Windows afford light and ventilation. A door connects with pantry that is equipped with shelves and lighted by window. There is space for refrigerator, led from door in entry. A door also opens to entry where steps lead to outdoors and to basement.

**The Bedrooms.** Through an open passage you enter a conveniently located hall leading to bedrooms and stairway to second floor. In designing the hall and bedrooms attention was given to the creation of service closets. A coat closet is located in passage from dining room to hall, with a linen closet in the hall. Front bedroom has ample space for furniture and a clothes closet with pole and shelf. Abundant light and air come from two windows. Rear bedroom has one clothes closet with shelf and wardrobe pole and another closet with shelf. Lighted and ventilated by two windows.

**The Bathroom.** Bathroom is conveniently located between the two bedrooms. A medicine case with plate glass mirror is furnished.

### SECOND FLOOR

An enclosed stairway leads to second floor. The plan calls for three bedrooms and clothes closets for just the small cost of finishing them. See option under floor plan.

**Basement.** Room for furnace, laundry and storage. Height of Ceilings, Main floor, 8 feet 7 inches, floor to ceiling. Second floor, 8 feet 2 inches, floor to ceiling. Basement, 7 feet, concrete floor to ceiling joist.

### What Our Price Includes

At the price quoted we will furnish all of the material to build this five-room bungalow, consisting of:  
Lumber; Lath;  
Roofing, Oriental Slate Surfaced Shingles;  
Siding, Clear Cypress or Clear Red Cedar, Bevel;  
Framing Lumber, No. 1 Quality Douglas Fir or Pacific Coast Hemlock;  
Flooring, Clear Grade Douglas Fir or Pacific Coast Hemlock;  
Porch Flooring, Clear Edge Grain Fir;  
Porch Ceiling, Clear Grade Douglas Fir or Pacific Coast Hemlock;  
Finishing Lumber;  
High Grade Millwork (see pages 110 and 111);  
Interior Doors, Two Vertical Panel Design of Douglas Fir;  
Trim, Beautiful Grain Douglas Fir or Yellow Pine;  
Medicine Case;  
Windows of California Clear White Pine;  
40-Lb. Building Paper; Sash Weights;  
Eaves Trough; Down Spout;  
Chicago Design Hardware (see page 132);  
Paint for Three Coats Outside Trim and Siding;  
Shellac and Varnish for Interior Trim and Doors.  
Built on a concrete foundation and excavated under entire house.  
We guarantee enough material to build this house. Price does not include cement, brick or plaster.  
Complete plans and specifications.  
"Honor Bilt" construction explained on pages 12 and 13.

### OPTIONS

Sheet Plaster and Plaster Finish, to take the place of wood lath, \$174.00 extra. With attic, \$271.00 extra. See page 109.  
Storm Doors and Windows, \$56.00 extra. With attic, \$89.00 extra.  
Screen Doors and Windows, galvanized, \$37.00 extra. With attic, \$47.00 extra.  
Oak Doors, Trim and Floors for living and dining room, Maple Floors in kitchen and bathroom, \$142.00 extra.  
For Prices of Plumbing, Heating, Wiring, Electric Fixtures and Shades see pages 130 and 131.

Can be built on a lot 32 feet wide



FIRST FLOOR PLAN



Partial view showing living room and dining room of the Sheridan. There are many other ways to furnish this bungalow home.

For Our Easy Payment Plan See Page 144



Finished Second Floor Plan, \$241.00 Extra

SEARS, ROEBUCK AND CO.

T'602

Page 33

Figure 8: Catalog house from the Sears, Roebuck Catalog of Houses, 1926 (Sears 1991).

by 1934 (*Sears* 1991). Their advertising continued to promote the image of the home as symbol of moral virtue: “To get the full share of Good Health, Long Life and Happiness for yourself and kiddies, to get the most out of life as our Creator intended it should be, A HOME OF YOUR OWN is an absolute necessity. It promotes happiness and contentment, for it is the most pleasant and natural way to live. It has the correct environment made up of the natural instead of the artificial” (*Sears* 1991 p. 1). Technological advances also played a role in advertising: “Skyscrapers are Ready Cut. Why Not Your Home?” one two-page ad asked (*Sears* 1991 p. 8-9).

Despite the ubiquity of the catalogs in the early twentieth century, Reiff writes that prefabricated houses built in that period represented “only a modest percentage of houses built. The influence of the designs *in* the catalogs. . .appears to have been considerable, however” (2000 p. 251). Reiff argues that many competent house builders could look at a drawing or sketch and build a house based on that, using what they knew of framing and building rather than relying on a plan. Although he has cited dozens of examples of pattern-built houses across the U.S., he believes that many more were built in imitation of other houses rather than with a house plan (2000).

## Pattern Books' Decline and Rise

After World War II, fifteen years of pent-up housing demand led to an unprecedented level of new home construction, and it was met by developers of new subdivisions who could mass produce houses. To cut costs, they often offered only one or two housing styles, with only small features to differentiate one from another. Pattern book authors changed their focus, choosing to appeal to these large builders since they were dominating the housing market. These developers were more interested in conservative designs that would be most likely to sell. Guter and Foster argue that “as a result, the builders’ catalogs became repositories of safe, traditional design, unlike the best of the nineteenth-century pattern books, which took their readers into unexplored architectural territory” (6). Fewer pattern books were published, and there was little interest in buying a pattern book to choose one’s home when new subdivisions with different styles of homes were constantly being built and prospective homeowners could see them in person instead of looking at a mail-order catalog.

The resurgence of interest in pattern books grew out of the historic preservation movement in the 1960s. The passage of the National Historic Preservation Act in 1966 created a national system for evaluating and preserving buildings as well as groups of buildings and neighborhoods. Declining areas could then apply for federal funds to rehabilitate. Prior to this Act, money was only available to demolish and rebuild: this was one reason for urban renewal’s popularity. Beginning in 1976, new tax laws also included tax abatements or tax credits for renovation on recognized historic properties. The tax credits had a tremendous effect on preservation because it became more affordable for individuals to restore properties. Pattern books became a valuable resource for renovations of these homes.

Pattern books that had been out of print for decades began to be republished. Dover Publications, Inc., republished Gustav Stickley’s *Craftsman Homes* in 1979 and *More Craftsman Homes* in 1982 (Stickley 1979, Stickley 1982). *Craftsman Homes* does not have any advertisement for other books in it, but *More Craftsman Homes* lists several dozen “Dover Books on Architecture,” including reprints of Benjamin’s *The American Builder’s Companion*, Roberts’ *Illustrated Millwork Catalog*, and *Victorian Domestic Architectural Plans and Details*. (Stickley 1979, Stickley 1982). Several of these remain

in print, with many republished titles added, in the 1991 reprint of *Sears, Roebuck Catalog of Houses*, 1926 and the 1994 reprint of E. C. Hussey's 1874 book *Cottage Architecture of Victorian America* (formerly *Hussey's National Cottage Architecture; or, Homes for Every One. Chiefly Low-Priced Buildings for Towns, Suburbs, and Country*) (Sears 1991, Hussey 1994).

In 1978 the American Life Foundation Study Institute republished *Victorian Architectural Details* and *Late Victorian Architectural Details* (formerly titled *Combined Book of Sash, Doors, Blinds, Mouldings, Stair Work, Mantels, and all Kinds of Interior and Exterior Finish*). They received the original for *Late Victorian Architectural Details* from a librarian who noted,

Our house is a nice Queen Anne cottage built in 1892 and we are gradually accomplishing a qualified, but close restoration. The front door, for example, is a No. 238 "Oshkosh" marginal, with ruby flashed glass in the marginal panes and a very nice openwork bronze lockset which is embellished with dolphins. A side door (which I managed to retrieve before the neighbor who replaced it with a slab could send it to the dump) is a somewhat earlier version of the No. 253 "Cleveland," with slightly different carving on the lower panel (*Late Victorian Architectural Details* 1978 p.1).

Along with reprints of older pattern books, new ones were created as dissatisfaction with postwar residential development grew. These newer pattern books have changed their focus, their audience, and their purpose. They have several distinct differences from older books and catalogs which will be discussed in Chapter 2.

## **Chapter 2**

### **Best Practices Case Studies**

Since the resurgence of interest in pattern books began in the 1970s, a number of influential pattern books have been written. They are of a markedly different style from their predecessors, however. One notable shift has been the involvement of the public sector. Prior to this period, all pattern books and catalogs were published by entrepreneurs. The authors intended to capitalize on the public interest in homebuilding by selling their books to prospective homeowners or builders. After World War II some authors also tried to market their books to development companies. Pattern books for large-scale private developments are now the most prevalent type that is written.

For the first time, though, the public sector has become both an audience and a creator of pattern books. This shift has had important effects on pattern books and their target audience. Municipalities have begun to recognize that the successful revitalization of aging neighborhoods is an integral part of reviving a decaying city or improving a vibrant one. This neighborhood revitalization has often been a grassroots effort, with neighborhood organizations or individuals rehabilitating housing on their own, sometimes using historic preservation tax credits. Cities have taken a variety of different routes to encourage and control specific types of development and redevelopment in these historic neighborhoods. By creating a pattern book, city officials can clearly identify and describe what should be built. They can also assist developers and residents in building correctly.

As the public sector has become involved in creating pattern books, the process has changed. Rather than one author offering a selection of architectural styles currently in vogue, pattern books have become a collaborative process. They are created by a company with a client. Even a pattern book written for a private developer will need public sector guidance. The public sector is not limited to city officials, either. Most pattern books are now created in a transparent process that includes community meetings. At these public forums, architects and planners present ideas for new buildings and renovations of old buildings. Residents respond to the ideas and contribute their own opinions on what should be built. Usually, the resulting pattern book has contributions



from a number of people and is an accurate reflection of what the public wants to see and what is best for the city.

Access is another difference between older pattern books and those created by cities. Because the focus is now on the resident, the goal is to make pattern books as accessible as possible to them. Pattern books are increasingly available online for free. Sometimes paper copies are also readily available at no cost to anyone who requests them. The goal is that by widely disseminating the material to all residents, city officials increase the likelihood that their guidelines will be followed.

Pattern books created by a city usually have several target audiences, including private developers, residents, and non-profit organizations. The pattern book is usually written in an attempt to change the contemporary building styles in that community to reflect a particular architectural style or neighborhood pattern that is present in older parts of the city.

### ***A Pattern Book of Boston Houses***

One of the oldest examples of a city pattern book is *A Pattern Book of Boston Houses*, a 58-page guide created in 1988 for use by planners and architects (see Figure 9 and Figure 10). In 1987 the city launched Project 747 to collaborate with private developers and individuals to develop affordable family housing on city-owned vacant lots. Most of these lots were clustered in a few neighborhoods south of the core. *Boston Houses* was created as a supplementary document to the city's Design Guidelines for Neighborhood Housing. It does not document every housing style in the city, only those most prevalent in the neighborhoods in which the city intended to build (Doern 1988).

Housing types are presented based first on massing: two-family, three decker, six-family, and rowhouse. These typologies are then broken down based on architectural details that differentiate each from the other, such as gable front versus hipped roof. Pen and ink drawings of the style are included in each section, with brief notes pointing out the typical features. Other drawings show how the house is typically set in its lot and along a street as well as its street elevation. More drawings follow, illustrating variations on doors, windows, porches, balustrades, and roof details. Finally, a collection of photographs documents real examples taken from the neighborhoods in Boston (Doern 1988).

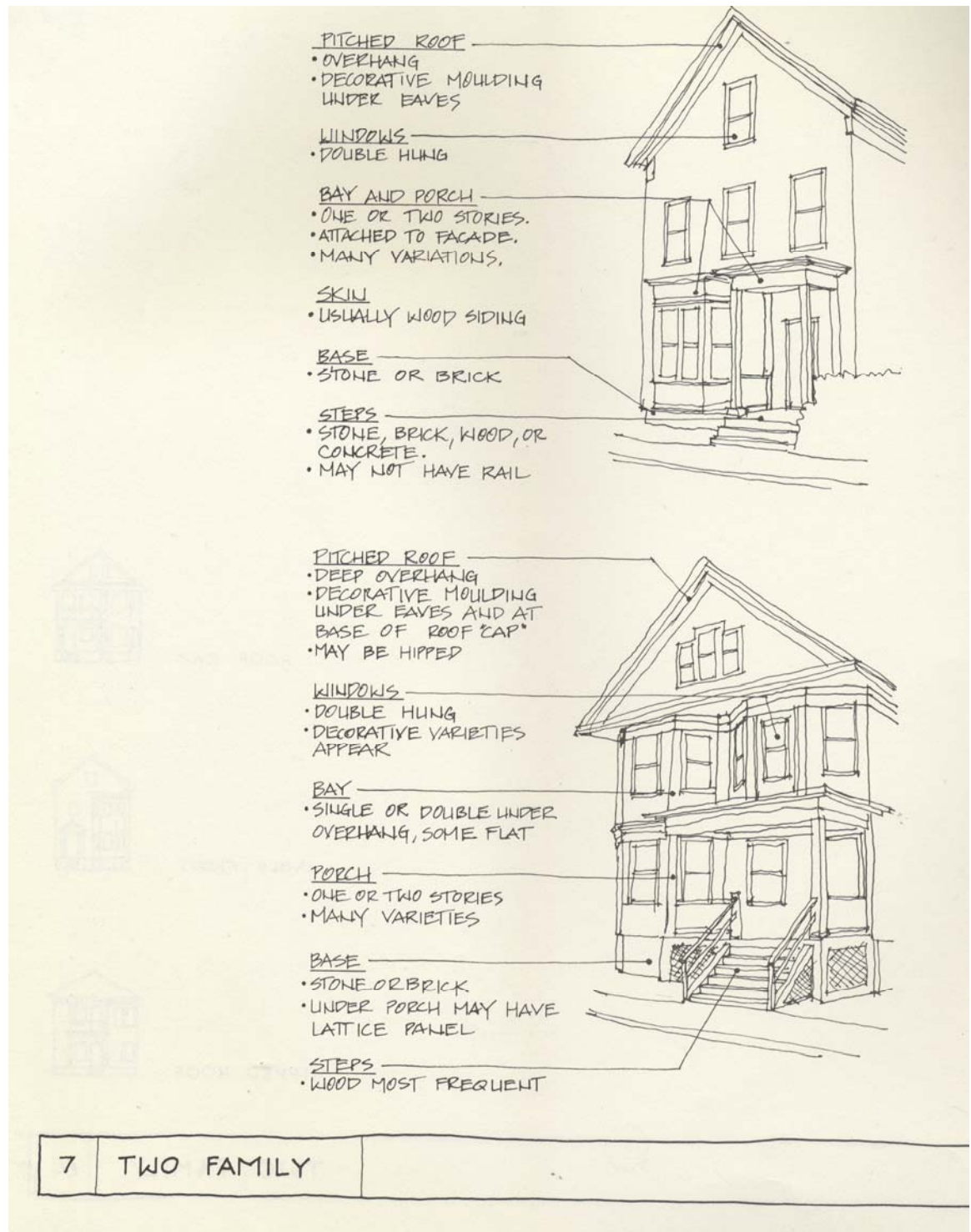
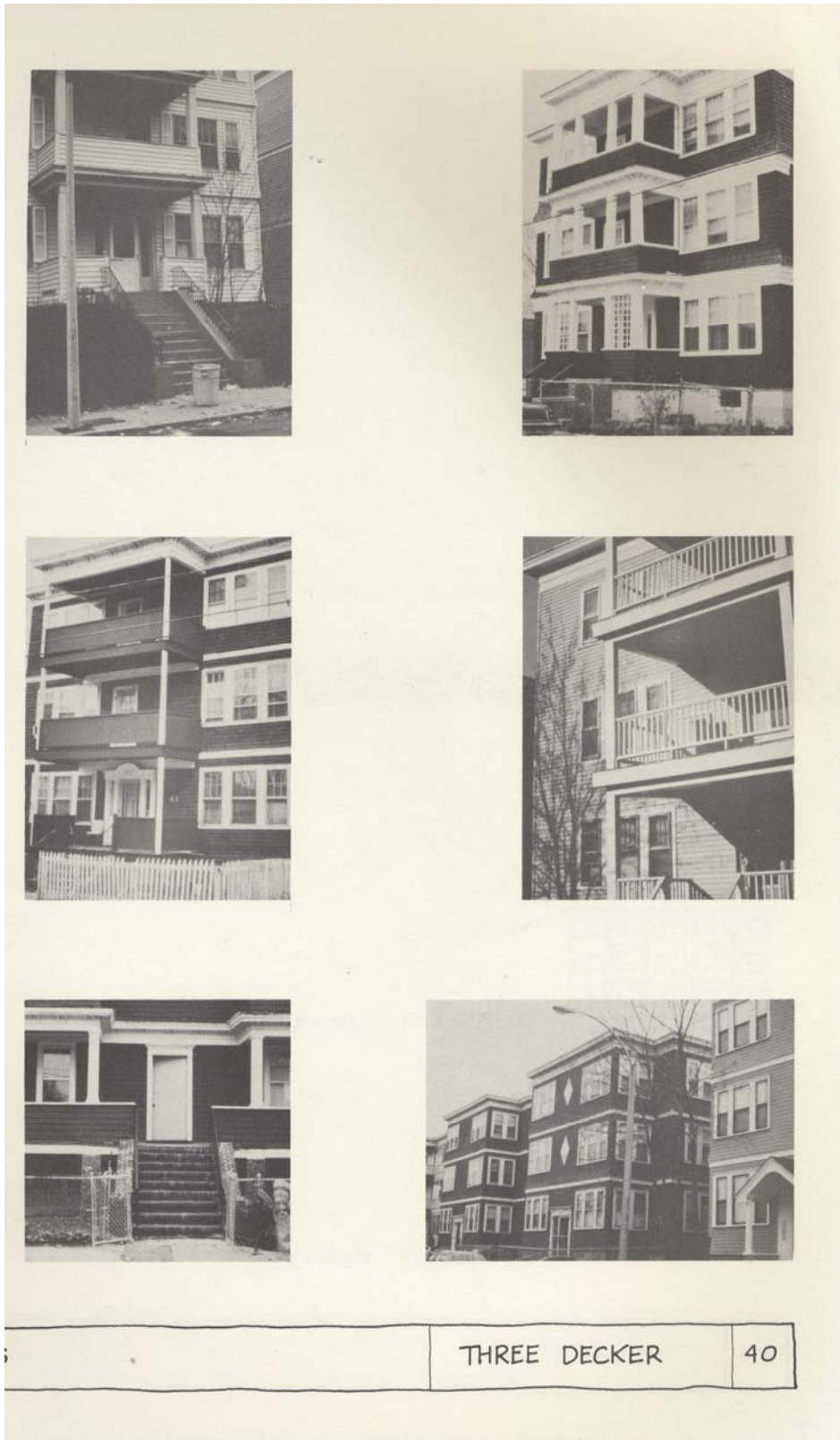


Figure 9: Pen and ink drawings to illustrate typical two-family houses in south Boston (Doern 1988).



*Figure 10: Photographs from the book that document houses in south Boston (Doern 1988).*

## ***Affordable Housing: Reweaving the Fabric of Manhattan's Older Neighborhoods***

A more recent example is the book created by an undergraduate architecture studio class at Kansas State University in 2001, *Affordable Housing: Reweaving the Fabric of Manhattan's Older Neighborhoods*. This book opens with a report outlining the housing needs and expected growth patterns in Manhattan, Kansas. Little information or documentation of the existing neighborhoods is included. Instead, the primary focus of the book is on the students' plans for new housing and their description of how the housing would be compatible with existing neighborhoods.

Manhattan's mayor, Bruce Snead, asked Dr. Gary Coates and his students to find solutions to the affordable housing shortage. Their recommendations should respect the existing fabric of the neighborhoods and should not overwhelm them with too much density. At the time, many city residents were protesting "super-duplexes," eight-bedroom structures usually used as student housing. Residents claimed these buildings did not respect the scale and character of the neighborhoods in which they were constructed. The solutions offered by the architectural students included creating accessory dwelling units behind primary houses, incorporating basement apartments into housing, and creating small-scale retirement centers. The accessory units and basement apartments were also beneficial because the rent the owner could charge for them would offset mortgage costs and enable less affluent owners to afford a home (Coates 2001).

Manhattan was anticipating a strong housing demand for moderate-income residents between 19 and 34 as well as an influx of people aged 65 and older. The town had a greater need for affordable rental than affordable owned housing. Thus, rental units were posited as a solution for homeowners who could use supplemental income and renters who needed affordable shelter. Housing solutions also focused on designs that could be built economically and sustainably and designs that enabled residents to age in place. These designs included bathrooms that could easily be made ADA accessible, putting a washer and dryer in the closet of the master bedroom, and building one-story housing. Putting in an accessory dwelling unit or an apartment in the basement would give an older homeowner supplemental income that could allow him or her to afford to stay in the home. The closeness of tenants could also be helpful in case of an emergency.

Energy-saving measures included southern glazing on windows to allow for solar gain in the winter; operable skylights that can create stack ventilation; super insulated exterior walls that decrease on heating and cooling costs; and a whole house fan that can augment natural ventilation and is cheaper to run than air conditioning (Coates 2001).

Since the book was published in 2001, Manhattan has made several changes that have improved the quality of new construction in the inner core. Most neighborhoods were downgraded from R-2 to R-1, limiting multi-family developments. One neighborhood east of campus was upgraded to allow greater development in that area. Passing a Traditional Neighborhood Ordinance as an overlay district in the historic neighborhoods also helped improve the quality of new projects. Coates wrote that the new ordinance provides “a solid precedent for any city that wants to make sure that the quality of traditional older neighborhoods is not destroyed by predatory development” (G. Coates, personal communication, December 27, 2006).

Not all of the recommendations Dr. Coates made were implemented, however. Coates and some residents are still working to change the zoning laws to allow backhouses as accessory dwelling units in the older residential neighborhoods. In 2002 city officials dropped the proposal from their agenda because of concern that developers would exploit it in violation of the zoning code. Now one garage apartment is currently planned as an experimental project. If it is successful, the zoning laws could be changed to allow more. In addition to creating more affordable housing and increasing diversity, passing the backhouse ordinance could be a way to help Manhattan get federal funding for public transit. This is because the ordinance would increase density (G. Coates, personal communication, December 27, 2006).

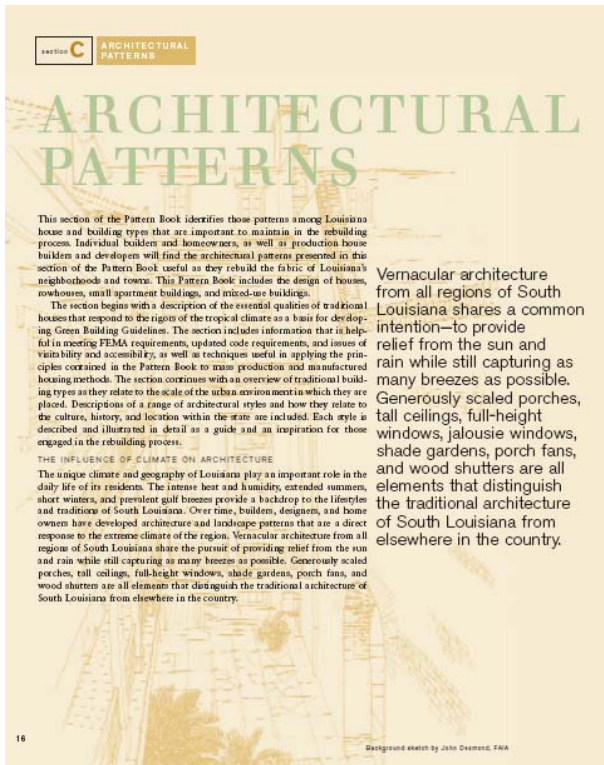
## Pattern Books for Rebuilding the Gulf Coast

On a larger scale than the books on Boston and Manhattan, two different pattern books have emerged in the past year focusing on parts of the Gulf Coast region devastated by Hurricanes Katrina and Rita in 2005. As with other pattern books, the target audience includes both developers and homeowners. Urban Design Associates created *Louisiana Speaks: Pattern Book* for the state of Louisiana. They also worked with the Mississippi Renewal Forum to create *A Pattern Book for Gulf Coast Neighborhoods* for the state of Mississippi. Like *Affordable Housing*, the books offer specific, place-based solutions to the housing problems. In the ‘Purpose of the Pattern Book’ section of *Louisiana Speaks*, the authors note,

The Pattern Book contains patterns and techniques for building housing, neighborhoods, and towns at a greatly accelerated pace while remaining true to the values and traditions of the people of Louisiana. These traditions provide guidance for rebuilding in harmony with the state’s natural environment and climate in the design and construction of environmentally responsible houses that incorporate many of the traditional architecture features of the region. The Pattern Book also provides guidance on incorporating hazard-resistant design and improved construction techniques into the built landscape. Doing so can prevent or reduce future losses of life and property from floods and winds in the years to come (Urban Design Associates 2006, p. 1).

As with most books written since the 1970s, the first step in the process of creating the pattern book is to conduct public meetings. By participating in them, residents can determine the goals and vision they have for their neighborhoods and outline their priorities. Because of the large scale of rebuilding, creators of both *Louisiana Speaks* and *Gulf Coast Neighborhoods* held numerous meetings. For example, meetings for *Louisiana Speaks* included Parrish Recovery Planning meetings to brainstorm large high-profile projects, three separate charrettes, and a series of public meetings during the creation of the book to ensure that residents’ opinions were being accurately incorporated into the book. Both books give an overview of community patterns present in the area and then present a range of architectural patterns for single and multi-family housing units that are similar to existing styles. They conclude with an overview of landscape patterns in the area and how they can be appropriately applied into new or renovated housing.





## LOUISIANA BUILDING TRADITIONS

The early settlers of Louisiana, arriving by water, brought their cultures, lifestyles, religions, and methods of building with them. In response to the climate, geography, and natural forces, these settlers created a unique architecture. In this Pattern Book, this indigenous style is referred to as Louisiana Vernacular and includes both Acadian-influenced and Creole-influenced house types, as well as Anglicized versions of them.

Later settlers who came from the north brought their methods of building and a collection of architectural styles which were then modified and adapted to the climate and culture of Louisiana. These include the Victorian, Colonial, and Arts & Crafts styles which can be seen in a wide variety of building types throughout the state.

These architectural patterns, followed for a very long period of time, have gradually evolved in form, blending traditions in ways that have ultimately created a rich mix of architecture in Louisiana's towns and cities. This continuity was broken with the advent of the industrial era and the radical break with the past called for by Modernist architects. The increasing popularity of mass-produced houses post World War II, and standardized patterns of sprawl. While it's true that the patterns have been broken, they have not been completely eliminated; traditional and modern houses continued to be built that held true to many aspects of their regional heritage and cultural form.

A leader in this effort was A. Hays Town, an architect who designed a series of remarkable buildings using the methods and forms of traditional Louisiana architecture. The floor plans of his houses are modern with large open kitchens and carefully placed windows and glass walls that open the houses to the outdoors. Yet the architectural language Town employed is an authentic and precise use of traditional proportions and elements. Town gained much of his credibility for traditional details by working for the Historic American Building Survey as a young man.

These forms continue to be used by builders and architects (in traditional and modern alike) who are seeking the material qualities of traditional buildings and using new materials in ways that carry the traditions forward in new houses. In the words of Karam and Riza, urgent need exists to build quickly using mass production techniques, yet in a way that continues to respect the traditions of the region.

## GALLERY OF EXAMPLES



Figure 11: Pages from the Architectural Patterns section of Louisiana Speaks (UDA 2006).



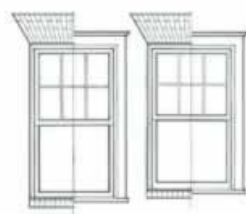
## ***A Pattern Book for Norfolk Neighborhoods***

Another innovation in pattern books, and one that has generated a large amount of interest across the United States and internationally, is the pattern book created by a city for a city (Downey 2006). Norfolk, Virginia, created a pattern book in 2003 that was designed primarily for use by its residents to renovate their existing housing stock (see Figure 12). Much of the information in the pattern book is also applicable to developers working in Norfolk, but the focus of Norfolk's book is on the individual resident. It is an instructional guide that helps residents identify their housing style, learn about ways that similar houses have been renovated and expanded, and find new ideas for improving their own housing. This book was also written with the help of UDA. Like *Louisiana Speaks* and *Gulf Coast Neighborhoods*, it is broken up into sections for neighborhood patterns, architectural patterns, and landscape patterns. Fifty of its 70 pages describe the half-dozen most prominent architectural patterns in Norfolk (City of Norfolk 2003).

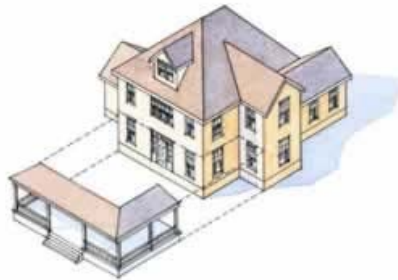
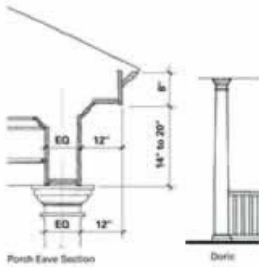
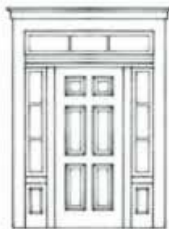
Ten thousand copies were made in 2005, and another 5,000 copies were printed in 2006. Norfolk's book is inexpensively printed on newsprint so that copies can be widely disseminated. The city has also placed the pattern book online at no cost. The city of Norfolk distributes the pattern book at meetings, conventions, and workshops. New residents and all area homebuilders who do new construction have been given copies. The city offers consulting services for any resident or builder who wants to incorporate those design features into a new house or a renovation or expansion of an existing house. Andrew Northcutt, who works for the city, said

The biggest thing it has done is raise awareness. People are intrigued by it so they pick it up and go through it and come to find that their house is unique, it is a particular style. It sparks the fire to learn more about their house and their neighborhood, and individually they want to preserve that. So when they go into a renovation project, they're aware of it and want to preserve the specific element that makes it unique....As an educational piece it has been a very strong influence within the communities. (A. Northcutt, personal communication, January 12, 2007).

Dozens of other cities and towns have contacted Norfolk about creating their own pattern books. Requests for the book have come from California to New York and from Australia to England. Denton, Maryland, is close to completing its own pattern book. The town has a draft of its pattern book available online for residents. A public hearing to vote on the adoption of the book is scheduled for early 2007 (Town of Denton 2006).



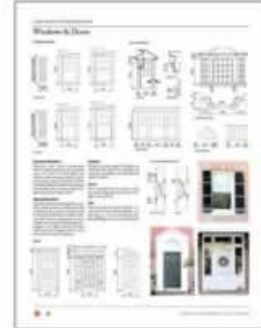
While windows and doors are available today from a wide range of manufacturers and come in almost any shape and size, correctly proportioned and detailed **Windows and Doors** are key to the design of the house. The Pattern Book illustrates standard window and door types used for each architectural style and special windows and doors used as accents.



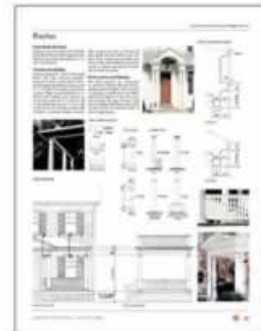
**Porches** are important elements in the Norfolk environment and find expression in almost every architectural style or vocabulary. Setting the appropriate column types, porch cornices, railings, and balustrades is key to establishing the character of the house. The Pattern Book offers options found within a particular style complete with sample profiles that illustrate the correct dimensions and components.



The final assembly of the various components should produce a house of recognized character and quality no matter what the size. Appropriate materials are discussed in the Appendix. A series of illustrated possibilities within each style section demonstrates the effective application of the Pattern Book guidelines.



The Doors & Windows Page of the Norfolk Colonial Revival Architectural Style



The Porches Page of the Norfolk Colonial Revival Architectural Style



Illustration of the correct assembly of a Norfolk house in the Colonial Revival Style

Figure 12: Illustrations from “Building a Norfolk House” (City of Norfolk 2003).

## **Chapter 3**

### **How Durham's Growth and Decline Shaped the Built Environment Durham's Rise as an Industrial City**

Durham was founded in 1850 when Dr. Bartlett Snipes Durham donated land to the North Carolina Railroad to construct a station in rural Orange County (Flowers 1976). A post office and a few commercial businesses were established soon after (Anderson 1990), but the population in 1870 was only 200 (Bishir & Earley 1985).

The Civil War inadvertently brought Durham to prominence. Although Orange County saw only a small skirmish near the end of the war, both Confederate and Union troops spent a few months in the area during the peace negotiations. The day peace was declared, celebrations broke out (Anderson 1990, Flowers 1976, Webb 2003):

The storehouse of J.R. Green's little frame tobacco factory was soon plundered of its entire contents, and Green counted himself a ruined man. Actually the theft proved an advertising scheme on a scale beyond his wildest dreams. The stolen delights of the unfamiliar bright-leaf tobacco that the soldiers enjoyed in the leisure of the spring days and the euphoria of the war's end left indelible memories. When the thousands of soldiers had scattered to their homes all over the Union, they sent back to Durham's Station for more tobacco and continued to ask for it, spreading its reputation far and wide, intent on recapturing the pleasure and mood of those days (Anderson 1990).

Durham quickly became a flourishing industrial city because of the demand for tobacco, priding itself on having "no aristocracy but the aristocracy of labor" (Flowers 1976 p. v, Kostyu & Kostyu 1978 p. 27). In part, the tobacco from Durham became famous because the bright-leaf tobacco indigenous to the area was better suited for smoking tobacco, which was becoming more popular than plug tobacco. Durham's particular method of smoking the tobacco was first discovered in 1839, and technological innovations in the 1870s created a consistently high-quality product (Anderson 1990). The new transcontinental railroad line greatly increased Durham's market. For the first time, tobacco could be shipped quickly and easily to any place in the U.S. (Webb 2003). As Durham became a hub for transporting tobacco, farmers began to sell their product there rather than transporting it up to Virginia. By selling it in Durham, their profit was larger and the trip much shorter (Anderson 1990, Wise 2002).

Durham grew exponentially in the decades after the Civil War. The population went from 200 in 1870 to 2,000 in 1880, 5,400 in 1890, and 6,700 in 1900 (Anderson 1990 p. 481). By 1878 there were seventy different businesses, up from half a dozen in

1870 (Anderson 1990). A flood of people came to Durham to work at jobs related to manufacturing: "laborers to handle the leaf at the warehouses, brokers, auctioneers, buyers, clerks, draymen, and hostlers. Opportunities and population multiplied in tandem" (Anderson 1990 p. 147). Farming had become less profitable in many parts of the South, increasing the desirability of a job in town with a steady paycheck. The post-war economic ruin of most large landowners meant that they could not afford to pay former slaves any wages, so African-Americans were looking for work as well as whites (Wise 2002). The promise of a new city meant opportunities for entrepreneurs as well; any new idea could make a person rich.

Three of Durham's most influential white leaders were Julian S. Carr, Washington Duke, and one of his sons, James "Buck" Duke (Bishir & Earley 1985). Carr used his education and financial acumen to aggressively advertise "Bull Durham" tobacco, eventually making his company the largest smoking tobacco industry in the world (Anderson 1990, Kostyu & Kostyu 1978, Webb 2003). Carr also brought the textile industry to Durham to manufacture cloth bags for tobacco (Little-Stokes & Dickinson 1980). Washington Duke first peddled his hand-made tobacco by wagon when he returned from the Civil War. When he installed a cigarette-rolling machine in the family's factory, it revolutionized the speed of production and became the factor that led to his ascendance as the top tobacco producer in the world (Anderson 1990). Buck Duke persuaded his four largest competitors to merge with him and form the American Tobacco Company. He then became, in 1890, the leader of the most powerful tobacco company in the United States: at one point he owned 90% of the United States tobacco industry (Anderson 1990, Webb 2003).

Once the big tobacco companies were firmly established, their owners began using a portion of their profits to invest in textile mills, following Carr's example. Factories for both industries were built within a mile and a half of the railroad station located on what is now known as Corcoran Street (Bishir & Earley 1985). As Durham grew in size and influence, other industries began, including soap works, millwork for housing materials, casket makers, and carriage makers (Kostyu & Kostyu 1978). Engaging in land speculation and building new subdivisions became another way to make money near the turn of the century (Anderson 1990). For instance, one 60 acre tract of

land near Cleveland Street was valued at \$3 an acre in 1850, \$10 an acre in 1869, and \$5,000-15,000 an acre in 1884 (Dickinson & Dreyer 1981).

Durham's growth occurred as dramatic events were changing the United States. The emancipation of the slaves during the Civil War had freed four million African-Americans, and while many of them traveled North to seek work, a significant number also stayed in the South. Durham's industries attracted thousands of African-Americans seeking work; in the 1870s and 1880s nearly half of the residents were black (Wise 2002). Hayti, a black neighborhood, was formed in the 1870s. It was located southeast of Durham's original town limits near two black churches (Anderson 1990, Wise 2002). Its highly successful business district became known as the "Black Wall Street." Other African-American neighborhoods formed outside town in the north and east (Anderson 1990). Unfortunately, much of Hayti was eradicated in the 1970s by urban renewal. Those areas that remain are still predominantly African-American neighborhoods (Brown 1982, Little-Stokes & Dickinson 1980).

Like Carr and the Dukes, prominent black leaders used business acumen in a number of fields to propel themselves to success. John Merrick was trained as a bricklayer and a barber. He used the profits from his five barbershops to partially fund the North Carolina Mutual Life Insurance Company and his real estate ventures. The Mutual is the oldest and largest African-American financial institution in the U.S. Dr. Aaron McDuffie Moore, another Mutual founder, had professional medical training and helped found the first black hospital in Durham (Anderson 1990, Webb 2003). In 1910 James Shepard founded the Training School, a historically black institution, now North Carolina Central University (Wise 2002).

Most of the racial tension in Durham remained under the surface: whites in power wanted to preserve a large, stable labor pool, and blacks wanted to preserve whatever progress they were able to make (Anderson 1990). When Reconstruction ended and Union forces went back up North, Southern whites quickly moved to restrict blacks with Jim Crow laws (Anderson 1990). At the same time, however, Durham's newness as a city may have helped allay some of the racist attitudes more prevalent in antebellum Southern towns, giving African-Americans there slightly more freedom to advance, at least financially.

## Durham's Built Environment

In the first decades of Durham's growth, the downtown core consisted of a few blocks of buildings around the original train depot (Brown 1982). Housing for the wealthy was built closest to the center, and many large, wood-frame Victorian houses were constructed along the roads to Raleigh and Roxboro, now called Holloway and Cleveland Streets. These roads were built on ridges and considered more desirable; poorer neighborhoods were built on the low ground between those ridges (Brown 1982, Dickinson 1981, Wise 2002). As Durham grew, it slowly spread out from its initial few blocks of development. The Bull Durham factory was built on West Pettigrew Street. The Durham Cotton Manufacturing Company was built in East Durham. The Durham Hosiery Mill and its mill village, Edgemont, further increased the size of Durham, as did the W. Duke and Sons tobacco factory on West Peabody and the Erwin Cotton Mills west of town. West Durham was built around the Erwin mill (Brown 1982).

Some mill owners provided housing for their employees. Shelter was often a wooden house one room wide and three or four rooms deep. One resident's description of Durham's mill villages serves as a reminder that living conditions in Durham were not equal:

Shacks for factory workers mushroomed in the lowlands between the graded streets. These little communities, which clung precariously to the banks of streams or sat crazily on washed out gullies and were held together by cowpaths or rutted wagon tracks, were called the Bottoms. It was as if the town had swallowed more than it could hold and had regurgitated, for the Bottoms was an odorous conglomeration of trash piles, garbage dumps, cow stalls, pigpens and crowded humanity. And the smell of putrefaction, pig swill, cow dung and frying foods (Wise 2002).

A rising disparity of wealth and the fast pace of construction created a number of odd juxtapositions in the young city. In the comprehensive book *Durham County: a History of Durham County, North Carolina*, Jean Bradley Anderson describes the 1880s-era town by writing that

below Durham's new prosperity and veneer of respectability the old raw frontier spirit was very close to the surface. A few men with superior intelligence, genius for business, and plain decency bolstered by a simple but firmly seated religious faith held the reins; they were responsible for the incredible progress the town had made and for whatever moral and cultural efforts its people had undertaken. Contrasts abounded. In front of the new mansions were impassable muddy streets. The same air that wafted music from Stokes's hall carried the stench of garbage (Anderson 1990 p. 190).

During these early decades in Durham's existence, living conditions were fairly primitive. Fires were so common downtown that insurance was nearly impossible to get until a volunteer fire brigade was formed in 1880. The threat of fire also led to the construction of masonry buildings instead of wooden ones (Anderson 1990, Brown 1982, Kostyu & Kostyu 1978). Wells and ponds provided the only water supply until 1887. Sewer facilities were not introduced until nearly the end of the century (Kostyu & Kostyu 1978).

However, the money flowing into Durham meant that infrastructure improvements and cultural amenities could be added rapidly as the city grew. By 1884 Durham had "lighted streets and more paved roads than any other town in North Carolina" (Dickinson & Dreyer 1981 p. 8). By 1895, Durham's downtown featured main streets that were 60 feet wide, bordered by 10-foot sidewalks and paved with cobble and crushed stone (Dickinson & Dreyer 1981). The first horse-drawn streetcars were used in 1887, and electric cars began running in 1902. Telegraph lines were built along the railroad in 1854, and the Southern Bell Telephone and Telegraph Company began providing phone service in 1888. Local banks provided the loans for many of these expensive services as well as financial backing for new industrial companies (Anderson 1990). Durham's wealthiest citizens improved the town by founding and supporting banks, an electricity company, public transportation, schools, libraries, and cultural societies (Bishir & Earley 1985). In 1892, Trinity College, now Duke University, relocated from Randolph County to Durham. Carr had been endowing the college for years, and he and the Dukes donated 68 acres of land and \$85,000 to facilitate the move, which had a positive cultural influence on the town (Anderson 1990).

## **The Growth of Suburbs**

The streetcar, first introduced in the 1880s, was the catalyst for the first series of suburbs built in Durham. The Dummy Street Railway, Durham's first trolley system, connected Trinity College to Ramseur Street in the north. Walltown began taking shape around it. This line failed in 1894, but subsequent lines flourished. Trinity Park grew quickly along a line. Within a few years North Durham residents could catch a trolley from Little Five Points down to the central business district, and, if they wanted to, take a second line to East or West Durham. Lakewood Park was built up around "the Coney Island of the South," a 27-acre amusement park that was also the terminus for a north-south trolley route (Anderson 1990).

Industry remained strong in the first few decades of the twentieth century, and the population continued to grow. In 1901, the city quadrupled its limits, and between 1900 and 1910 the population rose from 6,700 to 18,000 residents. New services had to be supplied to these residents, and their demands for infrastructure had to be met. More electric cars were built between emerging suburbs and the commercial area of town; roads were improved (Anderson 1990). Durham's industrial factories were so strong that the city was not badly affected by the Depression, and its suburban expansion continued until World War II (Brown 1982).

In 1911, John Hill began building Durham's first country club and golf course. The development was seen as a way to bring finer cultural amenities to the city (Webb 2003). Soon after Hillandale opened, suburbs began springing up further outside Durham's core: more than a dozen were created between 1900 and 1945, marketed both for upper-middle-class residents and the working class (Bishir & Earley 1985). Economic booms in real estate in Durham and the rest of the nation encouraged developers to build housing. People began wanting to move farther outside of town, and existing neighborhoods in the core began to be viewed as old-fashioned, crowded, and too close to the industrial uses in the city. Most of the mill villages closest to the town center were torn down in the early 20<sup>th</sup> century to add more commercial and industrial buildings; few remain today (Little-Stokes & Dickinson 1980). Their residents had to move elsewhere, either to houses in town that were becoming cheaper or to the new suburbs.

In 1926 more development was spurred by Buck Duke's \$40 million gift to the



newly renamed Duke University. A second campus was built a mile west of the original one, and a medical school opened. The new jobs created by the college's expansion meant that new housing was needed; the college would not provide any housing for faculty. An 1,100 acre tract of land adjacent to Duke became Hope Valley, and many new faculty settled there (Webb 2003).

## **Durham's Postwar Decline**

Durham's decline began around the end of World War II. As with many U.S. cities, a majority of residents moved out to new suburbs and abandoned the inner city. Sales in the business district went down, parking became an issue for both residents and business owners, and investment in Durham's core sharply declined (Wise 2002). As some industrial businesses expanded in the core, they began moving into older residential neighborhoods, some of which were rezoned commercial, and all of which declined. Many deteriorating houses were torn down. Some of the remaining ones, instead of being single-family residences, became boarding houses and apartments for low and moderate income residents. Some were converted to professional offices. Many were demolished to build gas stations or automobile dealerships. Coy Phillips, who wrote a dissertation on Durham's residential neighborhoods, noted that "while the property values slowly rise for business purposes the remaining residences in the district are gradually 'bled' for what they have to offer in rental value" (Brown 1982, Dickinson 1981 p. 14).

The textile industry began moving overseas, and their factories left Durham in the early 1970s (Wise 2002). By 1975, Durham's tobacco industry had begun dwindling: there were seven factories employing 4,100 people. In 1989, only one factory remained, and by 2000 it was out of business, too (Webb 2003). Retail stores left for the suburban malls (Wise 2002). Although the city built a new city hall, judicial building, library, and arts complex, downtown remained a bleak-looking area of vacant store fronts (Wise 2002). Worse, city schools suffered; the city-county school system divide was also a racial one, and it was not bridged until 1991 (Wise 2002).

The city fought its demise in a variety of ways. Part of its economic development program included working to bring Research Triangle Park (RTP) to the area. Some city leaders recognized the opportunity RTP would have for Durham and pushed for more

assertive land use planning, updated zoning codes, and new infrastructure. However, not all of these ideas were implemented (Wise 2002).

Another tactic Durham tried was an aggressive urban renewal program. Urban renewal had a disastrous effect on much of the city's historic built environment, leveling blocks and blocks of buildings. For instance, the Italianate-styled Union Station was demolished in 1967 to build a parking deck and part of the Loop. In the end Durham found, as did cities around the United States, that urban renewal's programs only accelerated the decay of inner cities. Urban renewal failed in part because it destroyed the communities that had existed by demolishing entire neighborhoods and scattering the residents (Brown 1982, Wise 2002).

Road improvements were another failed solution to Durham's problems. The gridded streets in the core were updated with a "confusing and frustrating one-way Loop that served more as moat than thoroughfare" (Wise 2002 p. 137). Interstate 40 was constructed several miles south of the core, and I-85 runs north of the city (Wise 2002). When the Durham Expressway was constructed along the railroad tracks just south of the core, it further divided black and white neighborhoods. Many African-American residents had supported urban renewal and transportation projects because of promises that Hayti would be revitalized along with the rest of Durham, bringing the area more wealth and new opportunity. However, far from an economic resurgence, the demolition of numerous historic structures in Hayti helped to crush the commercial vitality of that district. It was so complete that by the 1980s "Hayti" was no longer a neighborhood recognized on Durham maps (Brown 1982, Dickinson & Dreyer 1981).

Hayti's decline and partial destruction increased the racial tension. As with most American cities, racial discrimination has been an issue in Durham throughout its history. Some black city neighborhood streets were unpaved as late as 1980, and the houses that were built for black workers were unpainted wood structures that sometimes lacked any foundation other than pillars (Dickinson & Dreyer 1981).

Racial tension brought about changes, both good and bad, in Durham. A fight in an African-American-owned liquor store led to Durham's agreement to hire black police officers. As city politics became more organized, different factions based on race and political beliefs combined to fight for power. One political advertisement read,

"Whether anyone wants to admit it or not, in almost every election in Durham, the greatest concern is over how the Negroes will vote" (Wise 2002). The civil rights movement came to Durham in the form of demonstrations at restaurants, city pools, the Durham Athletic Park, and on buses; parents sued the schools to integrate (Wise 2002).

Durham's postwar history is not a string of failures, however. Some residents did manage to block city efforts at renewal. Trinity Park residents who opposed a new thoroughfare cutting through their neighborhood formed a neighborhood association and successfully blocked the arterial road. The Historic Preservation Society of Durham formed in 1974, a year after the first Durham county building was placed on the National Register of Historic Places (Brown 1982, Wise 2002). As industry left the city, Duke University's influence became stronger; its international reputation as a medical center and research facility has kept jobs and money coming into the city (Kostyu & Kostyu 1978). Despite its sometimes uneasy relationship with Durham, Duke was one of the only positive economic forces in the city in the 1970s and 1980s.

Today Durham is one of three towns in the Triangle region along with Chapel Hill and Raleigh. Durham's population was 187,000 in the 2000 census; the Triangle's was 1.2 million. Its proximity to Research Triangle Park and the presence of Duke University means there are a high number of well-educated residents (Wise 2002).

Durham is currently experiencing a tremendous amount of interest in its downtown and core area. Investment dollars are being put into new residential, commercial, and office complexes. Significant renovations of historic properties are being undertaken and have been completed. Demand by new residents for these properties is currently exceeding supply. Wealthy new residents are increasing the tax base and the city's ability to fund needed infrastructure and community improvement projects.

While the city is benefiting from the influx of new, middle-class residents, city officials are also mindful of the challenges faced by current low-income residents. Its poverty rate has remained stable since 2000, at about 13%. During this five-year period, however, Durham county's median housing price rose 19%, a greater percentage than nearby Wake and Orange Counties. Fortunately for affordable housing advocates, Durham still offers the most affordable housing in the Triangle region. The median

housing price is \$159,900, as compared to \$190,000 in Wake County and \$201,000 in Orange County (U.S. Census 2006).

To ensure that there is housing available to all of Durham's residents, the city is committed to facilitating the creation of affordable housing by partnering with a variety of non-profit groups. The city's pattern book, a portion of which is in Chapter 4, is part of that effort.

## **Chapter 4**

### **An Affordable Housing Pattern Book for Durham**

The goal of this pattern book is to help Durham's residents identify the architectural style of their houses and learn how they can be renovated or expanded in a way that is true to the character of the house. By describing the built environment in Durham, the book will also show developers how new housing should be designed so that it respects the neighborhood in which it is placed.

This pattern book will include the typical housing styles most prevalent in Durham's historic neighborhoods. These architectural styles include mill houses, Victorians, Colonial Revivals, and Arts and Crafts Bungalows. The massing on these older houses ranges from small, simple one-room-wide shotgun houses to larger I-houses, three rooms wide and two stories high, and four squares, two rooms wide and two rooms deep.

Many of Durham's houses were built using influences from more than one style. For instance, many of the Arts and Crafts houses in Durham have Colonial Revival interiors. One bungalow in Trinity Park has dentil work, a neoclassical detail, on its porch. Some Craftsman houses imitate an English Cottage style with a stuccoed exterior, clipped gable roof, and eyebrow hoods, small, semi-circular dormer windows at the roofline. Some of Durham's Colonial Revival houses have Victorian touches, such as wraparound porches, asymmetrical massing, and stained glass windows. Other Colonial Revival houses have Arts and Crafts features, such as decorative brackets below wide eaves or full-length porches supported by box pylons on brick plinths.

## **Mill Houses**

Mill houses are usually one-room wide, one-story houses, though a number of variations exist in Durham. Large groups of them were built by mill and factory owners to house employees between 1880 and 1930. Most mill villages were demolished at some point in Durham's history, but some houses remain. Gable-front and side-gable houses are the dominant roofing for the one story houses. The gable-front façade echoes the Greek Revival buildings that were popular from 1830 to 1850. The style gradually trickled down to these vernacular houses. They are usually sited directly on the street with no setback. Decorations are uncommon. The most common details are turned porch posts, sawn spandrels, or a small stained glass window on a front gable. Later, Craftsman details were also added to mill houses. Many houses have rear ells, a back room with a low, sloping ceiling. Although most mill housing was simple and sometimes crude, the houses of the Golden Belt Manufacturing Co. employees in Edgemont were built to a high standard: every room has a fireplace or wooden stove, and all houses have brick foundations. Privies were built in the 1900s, and interior bathrooms were added in the 1910s.

## **Materials**

All mill houses are built of wood. Tin or shingled roofs were used. A few examples have stained glass windows, but these are rare examples. Porch detailing is made of wood. Some houses have brick foundations and brick chimneys. Some later renovations have replaced wood with vinyl siding.

## **Massing**

### **One story**

Most one-story houses are three room frame buildings with front gables and front porches across the entire façade. A few houses have hipped roofs. They sometimes have rear ells, one-room wings that are perpendicular to the house. Some examples, nicknamed shotgun houses, turn one end to the street so that the house is one room wide. Duplexes of shotguns are common. Other examples are side-gabled houses one room deep, or single-

pile, so that all rooms face the street. Some houses are an L-shape (a side-gabled house with a front-gabled wing extending forward). Also called gable front and wing, this style is popular throughout the South. These houses usually have four rooms. Some houses are T-shaped. Edgemont has five-room F-shaped houses. A few square houses with pyramidal roofs were built in Southside. Houses built later are usually larger, double-pile or square shapes.

### **One-and-a-half story**

East Durham has some one-and-a-half story houses. These side-gable houses usually have dormer windows and central chimneys, though the earliest houses built have exterior chimneys. The one-and-a-half story houses in Edgemont were nicknamed “story-and-a-jump.” They lack dormer windows and were often built as duplexes. In the 1930s, some bungalows with stylistic attic dormers and recessed front porches were built.

### **Two story**

A few two story houses were built, usually for foremen or larger families, closer to the mills. Although taller, they are otherwise similarly massed. Most had side gabled or triple-A rooflines (a side gable with a centered front gable). Hipped roofs houses were also built. A few two-story shotgun houses remain, mostly built between 1900 and 1920.



An example of a duplex near Lyon Park. Significant renovations have been done to this side-gabled house, including the addition of vinyl siding, changes to the porch, and shingles added to the windows.



This front-gabled, single-pile duplex in West Durham also has a new façade; the vinyl siding and porches have both been added on.



A rear ell affixed to the back of a house in West End.





A side-gabled double-pile house in Crest Street set on a brick foundation.



This double-pile house in Crest Street has Craftsman detailing, including exposed brackets beneath overhanging eaves as well as a porch roof that mimics the house's roof line.

## **Victorians**

Much of the small, vernacular housing built when Durham became a city in the 1870s and 1880s was based on Victorian houses. Although many of the larger Victorian houses have been demolished, a few remain on Holloway Street, in Trinity Park, and in other parts of Durham. Folk Victorian homes are more prevalent in Durham's existing historic housing stock. Most folk Victorians were built between 1870 and 1910.

High Victorian styles in Durham are characterized by an asymmetrical shape. Some examples have some walls or wings sheathed in shingles rather than a simple frame wall. Many have wraparound porches. Most have multiple roof lines: a single house may have hipped, gabled, and pedimented rooflines at several different elevations. Neoclassical columns on the porches are also common. Some houses also have front doors with transom and sidelights filled with leaded glass.

Folk Victorian houses come in a variety of shapes. This is because many builders constructed forms they already knew how to build and then added some detailing on to them to imitate the prevailing architectural trend. The richness of the millwork then available in Durham made folk Victorians popular and attractive houses. Homeowners sometimes added Victorian details or porches onto older homes, but because Durham had so little housing stock before 1870, it is unlikely that this was done often.

It is the detailing added to their facades that distinguishes folk Victorian houses from their plainer counterparts. For instance, porches commonly have spindle work detailing, both turned spindles below porch railings and lacy trim along the top of the porch. Eaves sometimes have visible brackets underneath them. Doors and windows are usually simple, though some windows may be pedimented. Houses have a symmetrical façade unless they are L-shaped, gable front and wing houses. The symmetry of the massing and the lack of textured and varied wall surfaces distinguish them from true Queen Anne houses.

## **Materials**

All Victorian houses are made of wood. Many windows are made of leaded glass, and a few examples have stained glass windows as well. Brick chimneys and foundations are common.

## **Massing**

There are a variety of massing types in Durham. One of the most popular styles are front-gabled houses. They are similar to the shotgun houses built by mill owners but have more detail and were often built in emerging neighborhoods by speculators. Another popular style throughout the South are gable front and wing houses. Houses with side-gabled roofs and pyramidal roofs can also be found here. All of these massing types have both one- and two-story examples. High Victorian examples are nearly always asymmetrical, and this makes them easy to distinguish from folk Victorian houses. With the exception of gable front and wing houses, most other folk Victorian houses will have a symmetrical façade.

## **Porches**

Folk Victorian houses are simpler and less ornate than the Queen Anne or Italianate houses they are influenced by. Thus, they have fewer details. The porch and the cornice usually contain the most detailing. Porch supports are usually either thin turned spindles or square posts with beveled corners. Lacy spandrels, triangular pieces of wood that give the appearance of an arch, are common. They are placed on each side of porch supports. Thin, turned balusters are also common in porch railings. Smaller balusters, usually less than 12 inches long, may be put in friezes and suspended from the porch ceiling.



This Queen Anne house in Trinity Park has a tower balanced by a wraparound porch, two interior chimneys, and several different materials encasing its walls.



This Victorian house in Lakewood has more details than the typical folk house, including fancy balusters under the porch railings, cut-out spandrels on the porch supports, and detailing under the front and side gables. Note the rear ell, a common feature on all kinds of Southern vernacular houses.



This triple-A house near Morehead Hill has little decoration besides the thin, turned porch supports. Note the symmetrical façade, a clear indication of folk Victorians.

## **Colonial Revivals**

Colonial Revival was a renewal of the style of early English and Dutch houses along the Atlantic seaboard. It was popular from 1880-1955. There has also been another resurgence of interest in the past couple of decades. Colonial Revival houses have a variety of influences. They include Post medieval English; Dutch, French, and Spanish Colonial; Georgian; Adam; and Early Classical Revival. Most Colonial Revival houses took elements from several styles, so that pure copies of one style are rare. Durham's houses typically have Georgian, Adam, and Classical influences. The most elaborate details on these houses are their entrances, cornices, and windows. Most examples in Durham are somewhat restrained in their use of details compared to houses in other parts of the U.S. Colonial Revival houses can be found in Hope Valley, Forest Hills, and Trinity Park, among other neighborhoods. There are vernacular forms of Colonial Revival houses in Southside, where boxy two-story houses were constructed with low hipped roofs and simple molded cornices.

## **Materials**

Many different materials are used in Colonial Revival houses. Houses may be frame or brick. Masonry became increasingly popular, especially after veneering techniques were introduced after the turn of the twentieth century. Brick is the most common material for plinths. Pylons are usually made of wood. A few houses have stained glass windows.

## **Massing**

There are eight or nine varieties of Colonial Revival houses beside the three mentioned below. Some houses in Trinity Park have asymmetrical facades or gambrel roofs. Other variations include centered front gables and second-story overhangs. Most Colonial Revival houses are two-story, but some are one-story or three-story houses. One common addition to a Colonial Revival house is a one-room, one-story side wing, either open or enclosed. These additions typically have walls of windows on all three sides. Many of Durham's Colonial Revival houses have four-square massing and give the appearance of a two-story box. Others have an asymmetrical shape that is a Victorian influence.

## **Hipped Roof with Full-Width Porch**

This form of Colonial Revival, also known as the Classic Box, was most popular before 1915. It has a one-story, full-width porch supported by classical columns. The two-story house is a symmetrical square or rectangle. Classic Boxes often have dormer windows that are hipped or gabled. Many also have two-story pilasters, faux columns set into the corners of the house.

## **Hipped Roof without Full-Width Porch**

This style is a simple, two-story rectangular house with either a small entry porch or none at all. It was the predominant style before 1910. This style often featured elaborate pedimented dormer windows.

## **Side-Gabled Roof**

This style is also somewhat common, but it did not become predominant after 1910. Like the hipped roof styles, most Durham examples are two-story with a foursquare massing.

## **Entrances**

Front doors are often elaborate. The shape can be rectangular, oval, or arched. Doors often have fanlights above and to the side, and sometimes there are porticoes with classical columns and a few steps down to the ground. Broken pediments above the door are common.

## **Cornices**

Cornices are usually part of a boxed roof-wall junction with little or no overhang. They often have dentils or ornamental brackets as well. Some houses have open eaves or rakes placed along the sides of the frame gable to cover the ends. Examples in Trinity Park have molded box cornices.

## **Windows**

Most windows are rectangular and have double-hung sashes, usually with six, eight, nine, or twelve panes. Some houses have multi-pane upper sashes over a single paned lower sash. Houses may also have bay windows and paired or triple windows. Some houses have Palladian windows.

## **Porches**

In Durham, porches are supported by classical columns or tapered box posts on brick columns, an Arts and Crafts touch. Some are complemented by a pedimented attic gable.





A Classic Box with a pyramidal roof and large dormer window in Trinity Park. Fanlights and sidelights surround the front door. The wraparound porch is a common Southern addition to four-square houses. Note the porch supports of box pylons on brick plinths, a Craftsman detail.



A Classic Box in Trinity Park made of brick. Its details include the paired windows, an interior chimney, dentil work under the roofline, and a neoclassical entry porch accentuating the front door.





A gambrel-roofed frame house in Trinity Park. This house also has a Craftsman-inspired front porch.



Another Trinity Park example. The second-story overhang is made of wood because cantilevered brick veneering was very difficult to construct.

## **Arts and Crafts Bungalows**

One of the most prevalent housing styles in Durham is Arts and Crafts, also known as Craftsman. This was the dominant housing style across the country from 1900 to 1930. It was inspired by the work of Charles and Henry Greene. These two Californians were influenced by the English Arts and Crafts movement, Asian wooden architecture, and intricately detailed hand-crafted products. Publicity in numerous magazines brought Arts and Crafts to the nation. A few large estates were built in this style, but the vast majority of Craftsman homes were small, one-story houses. Their popularity was due to the lavish details, built-in furniture, and warm, inviting feeling that the design evoked.

The shape of the house is fairly simple and low to the ground. Most of Durham's Craftsman houses have low-pitched gabled roofs with large overhanging eaves, exposed rafters and beams, and porches supported by square wood and brick plinths. Dormer windows are common, as are windows in pairs. The front façade is often asymmetrical, but usually the front doors and windows form a balanced facade.

Many Arts and Crafts houses are based on pattern book or catalog designs. Examples in Durham vary in the amount of elaboration they have. Southside has some vernacular houses with full-length and wraparound porches supported by tapered box posts on brick columns. Walltown's vernacular examples are mostly duplexes with a gable front and box or turned posts supporting full-façade porches. West Durham has some bungalows adorned with simple triangular brackets. The bungalows in Crest Street are more elaborate. These houses have triangular brackets, overhanging eaves, and box pylons on brick columns supporting the full-length porches.

## **Materials**

A variety of materials are used in Craftsman housing. The exterior walls are usually frame, but a few examples use stucco or masonry. Stucco and brick are the most common materials used for the plinths on front porches, but concrete block and stone are also used. The top columns are usually made of wood.

## **Massing**

### **Front-Gabled Roof**

These houses have porches that are sometimes underneath the main roof and sometimes have a separate, extended roof. Most front-gabled houses have one story, but examples of one-and-a-half or two-story houses are sometimes found. Few of them have dormer windows.

### **Cross-Gabled Roof**

Cross-gabled houses are also known as gable front and wing houses. Most of these houses are one-story. A few have dormer windows. The most prevalent porch form on these houses is a partial-width, front-gabled porch.

### **Side-Gabled Roof**

Most side-gabled houses are one-and-a-half story. They often have shed or gabled dormer windows in the center. Porches are usually underneath the main roof.

### **Hipped Roof**

This rarer type of Craftsman house can be either one or two-story. Examples of hipped roof houses often lack exposed rafters and overhanging eaves.

## **Porches**

Most of Durham's Arts and Crafts houses have porches. They typically have square, tapered columns set upon wider, sloping piers or a balustrade. Plinths usually extend from the base of the house up to a point above the floor of the porch. One distinctive feature of Arts and Crafts porches is the junction where the roof joins the wall. It is almost always open, not boxed in. The roof of the porch usually has a wide overhang with exposed rafter ends, similar to the primary roofline. Some houses have a triangular knee brace at the top edge of the roof.



This front-gabled bungalow near the West End has several classic features. The wraparound porch has elephantine box pylons supported by brick plinths. The porch's low-pitched roofline mirrors the primary roofline.



This front and side-gabled example has wide overhanging eaves supported by visible brackets. The full-façade porch has wood pylons set on brick plinths exposing the paired windows.



This front-gabled West Durham house has a smaller porch on its façade. Note the overhanging eaves, exposed brackets, and paired windows.

## **Chapter 5**

### **Discussion and Recommendations**

Pattern books have had profound effects on the built environment in the United States. When Europeans first began colonizing the United States, they created a built environment in which most people lived in crudely built structures designed purely for utility. Log cabins with cracks between rough-hewn logs were insulated with a mixture of dirt, sand, water, and hair. Just a century later, hundreds of small towns across the country were being filled with pattern book architecture, professionally-designed houses of all sizes and prices.

One of the most influential pattern book authors, A. J. Downing, pioneered the theory that “even the smallest dwelling for a thrifty laborer could be skillfully designed by a trained professional so that the plan was practical and efficient and the exterior was made artistic and pleasing” (Reiff 2000, p. 303). The widespread availability of pattern books and their inexpensive plans brought high-quality architecture to the growing middle class. By the 1870s all of the factory-made materials could be shipped by rail. The ingenuity of pattern book authors and homebuilders and advancements in the Industrial Revolution eventually created an industry of entire houses that could be purchased from a catalog and shipped to the owner’s property. Instruction manuals were detailed enough so that homeowners could even build them themselves rather than paying laborers. The efficiencies of the plans and materials lowered the price of housing so that homeownership was within reach of more and more Americans.

As pattern books became more popular, the influence of a local building tradition lessened (Guter & Foster 1992, Reiff 2000). Reiff writes, “As more and more people built houses based on plans from these books and catalogs and more and more carpenters and even architects turned to these volumes for emulation (or for making direct copies), house designs that had originated in Knoxville, Tennessee, Bay City, Michigan, or Chicago appeared throughout the United States.” He argues, however, that “far from producing a bland sameness, these published designs greatly improved the overall sophistication and artistic quality of local houses” (2000 p. 304). It is certainly true that the some of dozens of historic neighborhoods in Durham are filled with well-constructed

and beautiful homes, many of which were likely built using pattern book designs or copied from other pattern book houses.

After several decades in the mid-twentieth century when few pattern books were published for the public, a resurgence of interest in them began. This was partly due to the rise of the historic preservation movement and the desire to renovate old houses, many of which were pattern book houses. It also came as interest grew in older, pre-war building traditions and neighborhoods. There was a dissatisfaction among some architects and homebuyers at the post-war housing development pattern in which there were built hundreds of houses that were virtually identical and few distinguishing characteristics that could separate one subdivision from another.

The involvement of the public sector has impacted the form of pattern books in important ways. Though most pattern books are created for one particular private-sector development, a growing number are being created by municipalities or regional governments for their residents. This type of pattern book highlights architectural differences within a community and helps develop a unified whole. Rather than creating an entire new neighborhood that exists sometimes separately from a town, these pattern books look to integrate isolated new homes into existing neighborhoods. The result is a more densely populated neighborhood and a community of both long-term and new residents that reflects more diversity than a new development can.

There are several ideas in this paper that the city of Durham should use as it creates its affordable housing pattern book. Durham already has a strong community of residents who are involved with the Historic Preservation Society of Durham and their own neighborhood organizations. City officials have signaled their support of the historic neighborhoods in the core by including in the comprehensive plan the creation of an affordable housing pattern book. They have also shown their commitment to providing affordable housing through their partnership with Self-Help, Habitat for Humanity, and TROSA, all of which are creating safe affordable housing for Durham's residents.

As Durham moves forward with its affordable housing pattern book, it should learn from the ideas other cities have had. In Manhattan, Kansas, residents have not yet passed a zoning ordinance for accessory dwelling units that was first proposed in 2001. The city of Durham must include a program of education and awareness before it

proposes any changes to its ordinances that would increase density and diversity in its neighborhoods. Residents must understand the benefits of such laws before they vote on them. Durham should also consider the success Manhattan has had with its overlay districts, which have encouraged a higher-quality of new construction in most historic neighborhoods.

City employees should also closely examine the Norfolk pattern book and the results the city has had since it published the book. By printing the book on newsprint, the city is able to distribute copies to any interested residents and all homebuilders and developers at a very low cost. The pride residents feel at owning a home that reflects Norfolk's particular building tradition has led to a greater interest in preserving the heritage of the built environment in Norfolk's neighborhoods. By influencing the character of new homes in older neighborhoods, Norfolk is also able to keep the architectural standards of its historic neighborhoods high.

Durham can expect to dramatically influence the quality of its new homes by creating a pattern book for the city and encouraging developers and homeowners to use it to learn more about the design of Durham's neighborhoods. The pattern book can play an important role in preserving the quality and style of historic neighborhoods near the core. It can also help revitalize neighborhoods as interest grows in the core and people want to move into these centrally-located communities. Durham has a large stock of vacant houses and lots that represent opportunities for new residents to live close to the city. As homeowners who improve and maintain their historic properties, they can become part of Durham's vibrant renovation.

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